8777

The OIL WEEKLY

OIL and GAS ENGINEERING

FOR OIL AND GAS PRODUCTION AND PIPE LINE DIVISIONS

THE WEEK'S NEWS INTERPRETED

DECEMBER 24, 1934
Vol. 76 Number 2

"Frank of Sunnylawn"

A "POINTER" FOR THE NEW YEAR

"ALL SET" to wish you A Merry Christmas and A Happy New Year... May 1935 "Point Out" to you many "Coveys" of Peace, Prosperity and Happiness

HUGHES TOOL COMPANY
HOUSTON, TEXAS

We hope Santa will bring you some "REEL" JOY this CHRISTMAS

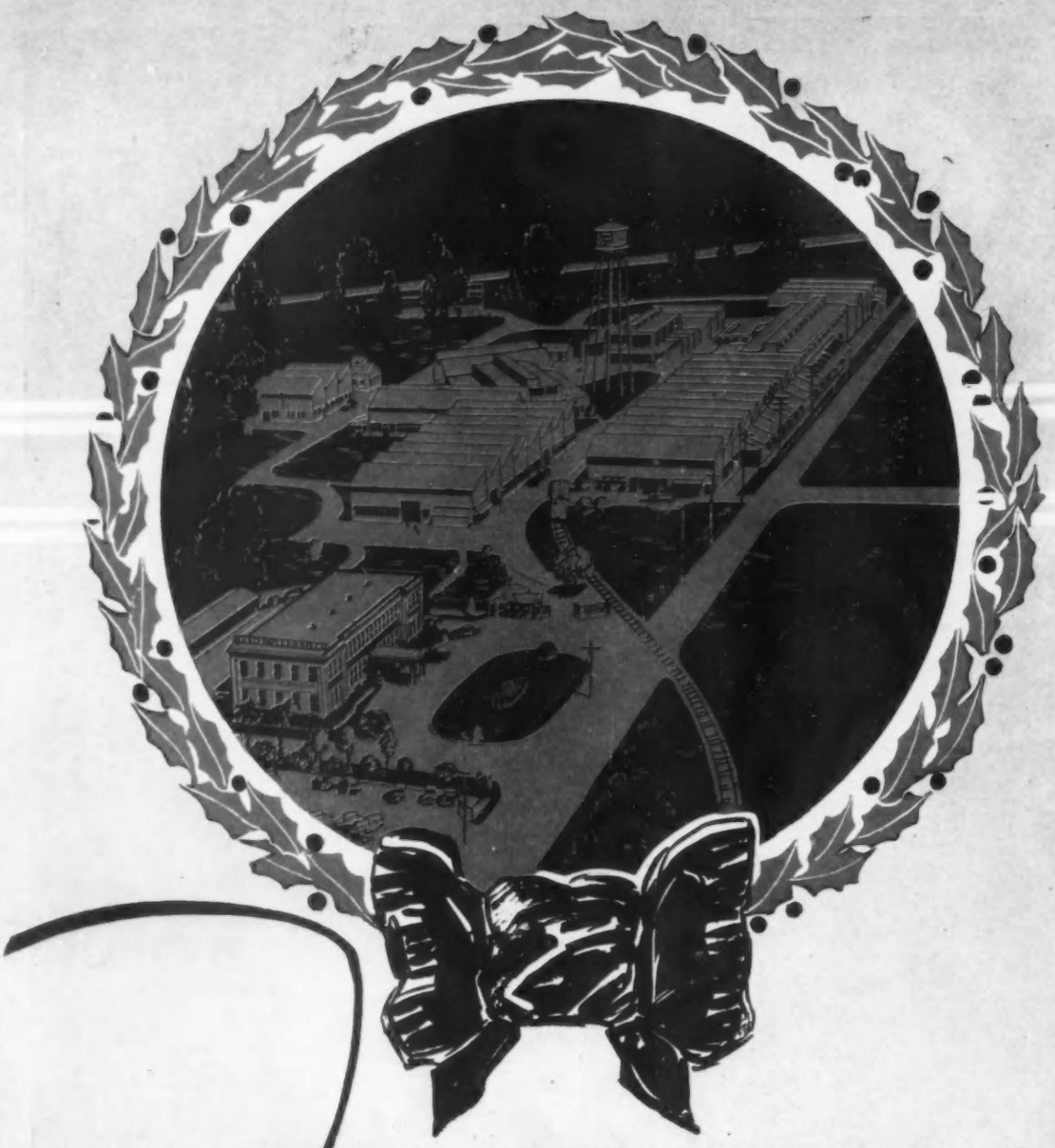
. . . and hope to have the privilege of contributing some "reel" happiness to your operations, during 1935.

UNION WIRE LINES

The "ULTIMATE LOW COST WIRE ROPE"

The OIL WEEKLY. Issued weekly by the Gulf Publishing Co., 3301 Buffalo Drive, Houston, Texas. Subscription price $1.00 per year; 15 cents per copy. Entered as second-class mail matter December 23, 1916, at the post office at Houston, Texas, under act of March 3, 1879.

Best Wishes for A Happy Holiday Season
and a Prosperous New Year
GASO PUMP & BURNER MFG. COMPANY



From all of us
Christmas Greetings
the
Reed Roller Bit Family

THE OIL WEEKLY

ENGINEERING « STATISTICS » THE WEEK'S NEWS

EDITORIAL STAFF

WARREN L. BAKER
Editor

J. KENT RIDLEY
Managing Editor

ASSOCIATE EDITORS

JACK LOGAN — BRAD MILLS
WM. V. GROSS

DISTRICT EDITORS

B. F. LINZ.....Washington
FLOYD SWINDELL.....Tulsa
H. H. KING.....Fort Worth
W. E. GREEN.....Los Angeles
EARL S. POST.....San Antonio
R. W. BYRAM.....Austin
CHAS. LEYENDECKER.....Houston

PUBLISHED BY
GULF PUBLISHING COMPANY
HOUSTON, TEXAS

R. L. DUDLEY, *President*
A. L. BURNS, *General Manager*
S. W. ROBINSON, *Editorial Director*

ADVERTISING STAFF

DICK SWINSKY.....New York
W. W. PIGUE.....Pittsburgh
T. W. NELSON.....Chicago
J. F. CARTER, JR.....Tulsa
W. E. GREEN.....Los Angeles
CHAS. WYATT.....Houston
WM. ATCHESON.....Houston

W. J. HUDSPETH
Circulation Manager

Contents « December 24, 1934

Volume 76 ◆ Number 2

THE CHANGING PANORAMA..... 7

NEWS OF THE WEEK:

Earnings On Upward Trend..... 9
Investigators' Report This Month..... 11
Federal Allowable Increase..... 11
Ickes Says Public Utility..... 12
Government to Make Cost Survey..... 46
Code Commitee Wants Federal Control..... 12

Production 41
Crude Prices 43
Personals 16
"Squeaks" 81

PRODUCTION ENGINEERING:

Electric Pumping Not New in Kansas..... 19
Mechanical Down Time Analysis (Part V)..... 22

NATURAL GAS ENGINEERING:

Removal of Hydrogen Sulfide from Gas..... 31

FOREIGN DEVELOPMENT:

History of Knight's Dome, Australia..... 35

MARKETS AND STATISTICS:

Inventory Time Promotes Low Prices..... 39
Production Declines During Week..... 41
Gasoline Prices Down, Taxes Up..... 43

FIELD REPORTS:

Oklahoma 48
California 69
Kansas 50
Texas 52
Louisiana 62
Michigan 71
Mountain 63
Wildcats 72

NEW EQUIPMENT 79
News of the Equipment Makers..... 77

SPECIALIZED OIL JOURNALS
Published by
THE GULF PUBLISHING COMPANY

BRANCH OFFICES

NEW YORK.....250 Park Ave
PITTSBURGH.....Standard Life Bldg.
CHICAGO.....141 W. Jackson Blvd.
LOS ANGELES.....Haas Building
TULSA.....Hunt Bldg.
FORT WORTH.....W. T. Waggoner Bldg.
WASHINGTON.....Albee Bldg.

Member Audit Bureau of Circulations.

Published every Monday. Single Copies 15 cents. Subscription price: domestic and foreign, $1.00 a year. Entered as second-class mail matter December 23, 1916, at the post office at Houston, Texas, under act of March 3, 1879. Subscription restricted to those engaged in the producing and pipe line branches of the oil industry or the manufacturing and distribution of oil field supplies.
Advertising rates on application.

THE MAKERS OF LONE STAR CEMENT

AND 'INCOR' 24-HOUR CEMENT

TAKE THIS OCCASION TO EXTEND

Sincere Good Wishes
for the Holiday Season

•

DEC 26 1934

©C1B 249155

VOLUME 76, No. 2

DECEMBER 24, 1934

THE OIL WEEKLY

FOR OIL AND GAS PRODUCTION AND
PIPE LINE DIVISIONS

ENGINEERING • NEWS • STATISTICS

The Changing Panorama

THE OIL WEEKLY in the past has felt free to criticize any state or national governmental employee or bureau which we felt was not performing the full extent of its duty in enforcing the laws aiding the petroleum industry.

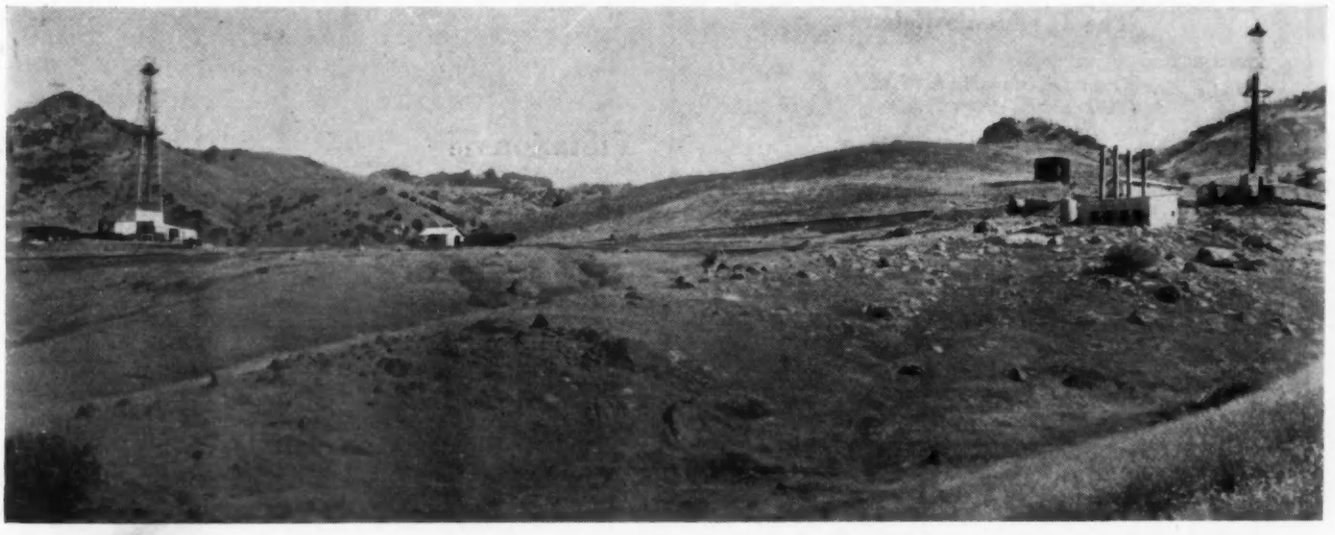
We would be unfair, indeed, if we did not compliment the Texas Railroad Commission and the Department of the Interior for the excellent work now being done in reducing hot oil runs from East Texas.

We have said at various times in the past when strong criticism was being heaped on the Texas Railroad Commission that due allowance must be made for court obstacles in the way of the commission's enforcement of the law. We have been equally outspoken at times on our belief that the commission was playing politics.

At this time the Texas Railroad Commission is doing as fine a job of enforcing the law as any law-abiding citizen logicaally could ask. True, the job is not perfect, but we have yet to see perfection in anything and when hot oil runs in East Texas are reduced to 10,000 barrels a day or less, the governmental organizations back of such law enforcement, be they state or federal, deserve hearty commendation.

The out-going tender board in East Texas, comprised of private citizens in that area, is to be congratulated on its unselfish contribution of time and effort. The oil industry owes the committee members a genuine debt of gratitude. Open hearings at which anyone with information may present their data largely are responsible for the results now being obtained and we hope that these open hearings on the part of both state and federal authorities will continue.

WE regret these men have resigned, for to tamper with the East Texas set-up now is dangerous and the oil business could be thrown for a large set-back in quick order. If rumors are correct, politics played a large part in the resignation of the tender board mem-



Buttes Oilfields, Inc., is drilling a second well at Marysville Buttes, Sutter County, California. The well on the right is producing gas for fuel to drill No. 2, to the left, now down to 6770 feet in hard shale, after having drilled through 2700 feet of volcanics. ***(Page 69.)***

bers, which may mean there will be criticisms again. This would be ruinous, and would come at a time when the situation is better controlled than ever.

Production Inflation Early?

THE national daily allowable has been increased 153,300 barrels daily. This raises the total recovery to 2,460,300 barrels per day.

In some corners the inflation of allowables is thought to have been 60 days premature, as a hard winter plus a late spring would be apt to inject a weakness in the gasoline price structure, from which it would take until mid-summer to recuperate from.

East Texas Slipping

EAST Texas is beginning to show signs of wear and tear, and some important changes are in store for the area. It is not meant by this statement that the field is through. The field will continue to be a large market factor and will make good with another billion barrels of oil, but, at least, there will be something different from the monotonous grind of big flowing wells on the completion list each week.

For the past several weeks there has been a growing number of new wells that fail to flow. This condition, formerly a rarity, now happens each week and in greater number. Another indication of the change taking place is the recently adopted practice of completing wells with cable tools. This is due to low reservoir pressures which make it hard to clear the producing sand of rotary mud.

This coming spring and summer, should market conditions permit a substantial hike in the field's allowable, say above 500,000 barrels daily, there is little doubt but that the pumping stage will be reached much quicker than many operators desire; and they may openly resist such a drainage volume for this reason.

The field should have recovered more than one pound in bottom-hole pressure during November, considering the decreased recovery brought about by lower hot oil production. It may gain another pound or so during December, because of still smaller illegal production, but the decline in bottom-hole pressure is apt to set in again in January.

The Oil Man's Calendar

FEBRUARY
18-21 *Petroleum Division A. I. M. E. (A. I. M. E. Annual), New York.*

MARCH
21-23 *American Association of Petroleum Geologists, Wichita, Kansas.*

APRIL
8-13 *Oil Equipment and Engineering Exposition, Houston, Texas*
11-13 *Petroleum Industry Electrical Association, Dallas, Texas.*
22 *American Chemical Society, New York.*

MAY
Natural Gasoline Association, Tulsa.

JUNE
20-21 *Pennsylvania Grade Crude Oil Association, State College, Pennsylvania.*

New Chairman

THE Planning and Coordination Committee did well when it selected J. D. Collett to finish the unexpired term of Judge Amos L. Beaty as its chairman. He is doubly qualified, having intimate knowledge of the industry through more than 30 years connection, besides having a knack of understanding human nature.

The industry owes Collett much for his devotion and sacrifice. He has permitted himself to be drafted for "public" service since the industry first went on its prolonged spree of surplus production. At this time he holds several other offices of "public" service nature, and devotes the greatest portion of his time to this work.

With Collett moved into the chairmanship of the Planning and Coordination Committee, the vice presidency of the committee and the chairmanship of Region No. 4 are left vacant. To replace Collett is a task, and it may be that no attempt will be made to fill the regional chairmanship, as a smooth running staff handled the work without difficulty for two months last summer when Collett was pinch hitting for Beaty, who was on a vacation.

Violations

IF the large number of state injunction suits are to be taken on their face value, there evidently are plenty of violations of the Texas Railroad Commission orders. However, the state apparently is acting promptly to shut down alleged violators activities, even though an injunction in the state courts does not mean much.

While the present attorney general's office, with James V. Allred, governor elect, at the head, is busy as their term of office nears termination, it will be important to observe what the new attorney general and his assistants do to keep the railroad commission orders intact.

Earnings On Upward Trend

Dividend payments are increased and bonds are redeemed in 1934, as oil companies experience most profitable operations for four years. Outlook for 1935 is promising, as oil demand is on increase, while supply continues limited below consumption, despite smallest inventory for eight years.

JACK LOGAN
Associate Editor

AS the year draws near the close, it is indicated that 1934 will go onto the records as the most profitable generally for the oil companies since 1930. Despite unfavorable results in the final quarter, 1934 will represent the best year out of the past four.

The first two quarters of 1934 were especially profitable, the third quarter brought profits but also a turn downward, and the fourth quarter is proving a period of only breaking even if not of losses. East of the Rockies gasoline prices were at unprofitable levels during almost two of the three months of the final quarter.

The Pacific Coast region was enjoying stability while the two-months' price wars raged late in the year east of the Rocky Mountains. But the West Coast had similar wars early in the year, while there were comparatively favorable conditions in the rest of the country. And so the net 1934 financial results for western and eastern companies are likely to be similar.

Producers Enjoy Profitable Year

Since the threatened crude price break of late October failed to materialize, companies specializing in or strong with respect to production, continued in the final 1934 quarter to maintain their relatively favorable position, as compared with companies specializing in or leaning toward refining and marketing. Throughout 1934, as in the latter part of 1933, crude oil prices have been mostly stationary at comparatively high levels. Prices of fuel oil and of various other products have been similarly favorable. But gasoline prices, both wholesale and retail, had several sinking spells during 1934.

The low refinery prices came usually at times of ineffective control of crude production. Hot oil in East Texas was commonly the primary market factor, in that connection. Conversely, high refinery prices prevailed when effective control of crude production occurred or was in prospect.

Outlook Promising for 1935

Although the final quarter of 1934 opened in an atmosphere of gloom, the clouds have mostly dispersed, and the period is ending with halcyon days. Crude production control has become remarkably effective. Refinery prices have consequently grown firm. And retail prices have been restored to normal in price war areas.

THE industry thus approaches the new year with courage and with hope. It has experienced a year marred to some extent by hot oil and price wars, but nevertheless the best for the past four years. And it now is about to start a new year that promises to be still better than 1934, since oil control has been improved, bringing greater market stability. Anticipations of a prosperous 1935 are also based in part upon the favorable demand outlook. Consumption of petroleum products continued in 1934 on the upward trend that started in 1933. In 1935 further expansion of demand is confidently expected. Any increase in industrial activity which may materialize will naturally bring greater consumption of oils.

In the first 10 months of 1934, the total demand for oils, amounting to 855,922,000 barrels, was the highest for the period since 1931. It was about six percent higher than in 1933. Domestic demand for motor fuel, aggregating 340,913,000 barrels in the first 10 months of 1934, was a little over seven percent higher than in 1933, and was less than one half of one percent under the all-time peak, set in the opening 10 months of 1931.

Favorable Factors in Oil Situation

Favorable factors in the oil situation thus include relatively heavy demand for petroleum products and effective control of crude oil production. In addition there is effective control, under the oil code, of the two other sources of supply, imports and storage. There is, in other words, success in making supply conform with demand, a situation which should promote strong markets. In fact, supply is being held below demand, with the result stocks are being reduced.

The petroleum code has contributed perceptibly to this balancing of supply with demand, through limitation of imports, and lately through effectiveness in restricting crude production in the troublesome East Texas field. But limitation of supply had been in progress for several years prior to adoption of the oil

code. Reduction of stocks during the past year have been especially significant, consequently, because of coming at a time when the stocks had already been shrinking for several years. There was further extension of the cumulative improvement in the industry's statistical position.

Stocks Lowest for Eight Years

IT is indicated that at the end of 1934 the inventories of petroleum and refined products combined will be the smallest since the end of 1926. During the first 10 months of this year 24,609,000 barrels of oils were withdrawn from storage in the United States, leaving total stocks of 579,581,000 barrels on hand October 31. Those stocks represented 206 days' supply, compared with 232 days' supply on hand a year earlier.

The stocks in the United States have been declining with but few interruptions for about five years. The total of 579,581,000 barrels on hand October 31, 1934, compares with 700,681,000 barrels held March 31, 1930. The shrinkage of about 120,000,000 barrels in the country's stocks during the five years has involved reductions of the inventories of both crude oil and of products. The stocks of refinable crude have come down nearly 100,000,000 barrels during the period.

The total stocks on hand October 31, 1934, included 346,415,000 barrels of refinable crude oil, 4,176,000 barrels of natural gasoline, and 228,990,000 barrels of refined products.

Dividend Payments Turn Upward

IMPROVED earnings for oil companies in 1934, touched upon above, are reflected tangibly in increased dividends; also in further reduction of long term indebtedness.

Companies of the Standard Oil group will distribute about 30 percent more in cash dividends during 1934 than in 1933, it is indicated, while the score or so major units in the industry, taken as a group, will pay out about 15 percent more. The latter increase represents the first upturn in dividend payments in five years, the disbursements having declined steadily after 1929, through 1933.

Long Term Indebtedness Reduced

Even during the depression years, 1931, 1932, 1933, major oil companies reduced their long term indebtedness over $200,000,000, or about 20 percent, while further important reduction has occurred in 1934, especially in recent months. Low money rates have encouraged such retirement of bonds.

Among the recent developments in this connection was announcement that Union Gulf Corporation, affiliate of Gulf Oil Corporation, plans retirement on February 1, 1935, of its bonds, consisting of $43,524,000 of 5s, at the call price of 103. It was said that the company would borrow $20,000,000 through a private issue in redeeming the bonds which would not have matured until 1950. Funded debt of Gulf Oil Corporation, with the Union Gulf issue retired, will consist of $27,247,000 of 5s due December 1, 1937, and $33,326,000 of 5s due February 1, 1947.

During November, Standard Oil Company of New Jersey and Socony-Vacuum Oil Company, both announced intention of redeeming large bond issues. Similar action had been taken a short time before by Shell Union Oil Corporation. Other companies which have redeemed bonds in 1934 have included Consolidated Oil Corporation, Humble Oil & Refining Company, Sun Oil Company, Sun Pipe Line Company, Magnolia Petroleum Company, Phillips Petroleum Company, Continental Oil Company of Delaware, General Petroleum Corporation, Tide Water Associated Oil Company.

Taking oil out of the ground and selling it for cash, oil companies are continuously transforming invested capital into cash. For several years there have been very few important new fields into which cash could be reinvested. That circumstance as well as low money rates has apparently entered into the large-scale redemption of bonds in 1934.

Refined Oil Markets Sluggish

THE markets for gasoline at Mid-Continent refineries have continued sluggish, despite virtual elimination of hot oil producing and refining in East Texas, through federal and state shipping control programs. The general desire of buyers to carry light stocks at the end of the year inventory period was apparently largely responsible. Contributing to the sagging of prices, also, perhaps, was the possibility the Supreme Court decision in the Panama and Amazon cases shortly after the opening of the new year may strip federal oil control authorities of the effectiveness displayed lately.

Attacks Against Shipping Control

BECAUSE of that pending Supreme Court decision, involving similar cases, Federal District Judge Randolph Bryant at Tyler, Texas, December 19 passed four cases in which injunctions were sought by East Texas refiners against federal control of interstate oil shipping.

The new intra-state shipping control by Texas authorities also came under attack December 19, when Judge Claude C. McCallum in a state court at Dallas granted Phoenix Refining Company a temporary restraining order, prohibiting the state from enforcing the new tender requirements against the company. But the state authorities also did some attacking of their own the same day, when the Texas attorney general's department obtained injunctions in District Judge Will C. Hurst's state court at Longview, in East Texas, restraining 349 defendants, named in seven suits, from violating the railroad commission's new tender orders. Meanwhile two other suits were being prepared for filing, naming 106 defendants.

Investigating Committee *Plans to Have Report* Ready This Month

Washington, D. C.—Recommendations of the oil investigating group headed by Congressman Cole of Maryland as to the need of further legislation on the subject of oil control are expected to go to the House committee on interstate and foreign commerce before the end of the month in a report which the oil probers this week began to write.

Meeting for the first time since the Los Angeles hearings in November, the oil committee on December 18 agreed to convene daily until its recommendations are whipped into shape, after which the actual report will be drafted. There can, of course, be no action taken on the report until after Congress convenes January 3 and officially appoints its new committees. Representative Rayburn of Texas, who headed the committee last session, however, will again be chairman.

No suggestions as to legislation have been made to the committee by officials of the oil administration, it was declared by Oil Administrator Harold L. Ickes, nor is the administration itself drafting a bill, as it did last year in the Thomas-Disney measure.

Ickes' statement was made in response to reports that he had recommended to the committee that the Federal Government be permitted arbitrarily to limit the production of the oil states. However, he added, if the committee wanted suggestions or even the draft of a bill, he would oblige it readily.

While the administrator is not personally involved in the consideration of new legislation, experts of the Petroleum Administrative Board "loaned" to the committee last summer have been working with it and are now aiding in the drafting of the recommendations.

While the administrator has never deviated in his belief that Federal control was essential to restoration of the oil industry, Ickes, in commenting upon the report made last week by the National Resources Board, declared that he has never objected to an interstate compact, as suggested by the board, "if it can be worked out and enforced," but intimated that "some of the gentlemen who are urging it" know it will not work.

While not actively concerned about the recommendations of the Cole Committee, it is indicated that the administrator will be prepared to press for renewed consideration of his oil control bill should the House group fail to recommend legislation along that line in its forthcoming report.

Texas Independent Group Opposes Federal Control

Austin, Texas.—E. B. Germany of Dallas was elected president of the Independent Petroleum Association of Texas at its annual meeting held here last week. He will succeed Major J. R. Parten of Shreveport and Houston, who was elected vice-president of the organization. Bailey W. Hardy, Austin attorney, was reelected executive vice president.

The board of directors of the association for 1935 were named as follows: M. G. Blalock; Marshall, R. W. Brown, San Angelo; D. H. Byrd, Dallas; M. S. Church, Dallas; C. R. Cole, Laredo; R. L. Cannon, San Angelo; M. B. Davis, Pampa; Charles Dore, Houston; J. O. Fox, Dallas; Jack Frost, Dallas; E. B. Germany, Dallas; W. E. Hunter, Dallas; B. W. Hardy, Austin; C. L. Morgan, Fort Worth; J. R. Parten, Houston; J. H. Reynolds, Cisco; J. A. Thompson, Fort Worth; B. F. Weekly, Fort Worth; J. M. West, Jr., Houston.

The association adopted several resolutions outlining their views on various important problems affecting the oil industry. One resolution repudiated the impression that Texas independents favored the "limited federal control" endorsed by the Independent Petroleum Association of America at its Fort Worth convention.

The action of the Texas Railroad Commission in eliminating from pipe line Rule 9 the one percent allowance for strappage was heartily endorsed.

The resolution on federal control urged officers to continue their fight against this plan, which was so successfully prosecuted during the past year. Having reviewed the activities of the Independent Petroleum Association of America, the Texas group emphasized their "opposition to any federal oil production control legislation whether it be 'limited' or in other form . . . the term 'limited federal control' is a misnomer. We call attention to the fact that the (oil) industry now is in the best statistical position that it has enjoyed for several years and that this progress has been made under state control and without support of any kind or character from the federal government save and except the activities of the federal tender board during the last few months . . .

". . . it is the position of this association that no further federal oil legislation is needed except the enactment as permanent legislation of the said Connally Hot Oil Amendment . . . barring from interstate and foreign

Federal Crude *Allowable Is Raised* 153,000 Barrels

Washington, D. C.—Moving to provide raw stocks for expanded refinery operations recommended by technical experts of the Bureau of Mines to bring gasoline inventories up, Oil Administrator Harold L. Ickes on December 17 announced an increase in the daily allowable crude oil production of 153,300 barrels, effective immediately and to continue through the month of January.

As a result, the daily allowable from December 17 to January 31, inclusive, was placed at 2,460,300 barrels as compared with 2,307,000 barrels for the first half of December.

The greater part of the increase went to the three principal producing states, Texas being given a raise of 65,000 barrels, Oklahoma 37,700 barrels and California 17,100 barrels, with the remainder scattered among all but three of the states, the allocations for Illinois, New York and West Virginia remaining unchanged.

Quotas for the remainder of the December-January period, as compared with those for December 1-16, are shown in the following table:

	Dec.-Jan.	Dec. 1-16	Increase
Arkansas	31,000	29,000	2,000
California	473,900	456,800	17,100
Colorado	3,500	3,000	500
Illinois	11,700	11,700	.....
Indiana	2,200	2,100	100
Kansas	137,100	123,900	13,200
Kentucky	14,000	11,700	2,300
Louisiana	99,700	94,000	5,700
Michigan	28,100	27,900	200
Montana	9,300	8,000	1,300
New Mexico	49,800	45,900	3,900
New York	10,000	10,000	.....
Ohio	11,700	11,500	200
Oklahoma	489,300	451,600	37,700
Pennsylvania	35,500	35,000	500
Texas	1,006,800	941,300	65,500
West Virginia	11,000	11,000	.....
Wyoming	35,700	32,600	3,100
Total	2,460,300	2,307,000	153,300

commerce all oil produced in violation of state laws . . ."

Turning to other problems the association resolved that "we urge the active enforcement of both state and federal anti-trust laws, and the passage of such additional legislation as may be necessary to effectuate the purposes for which said laws were originally enacted . . ."

The group endorsed the activities of the Railroad Commission in their efforts to obtain "reasonable and equitable pipe line rate regulation," and pledged their support to any legislation which would aid in the success of this program.

The commission was also urged to apply a uniform proration program in all the fields of Texas and to use the potential method as the basis for this program.

Code Committee *Tells Investigators It* Favors Federal Control

Washington, D. C.—Legislation giving the federal government control of oil production will be recommended to the Cole Investigating Committee by the Planning and Coordination Committee, it was decided this week.

By a vote of 11 to 9, with two not voting, the committee after a lengthy discussion of the situation decided to propose legislation along the line of the Thomas-Disney Bill of last session, with certain changes.

Included in the changes which the committee will seek are the insertion of provisions authorizing states to enter into compacts, and eliminating quotas for states keeping within such compact figures or within the production demand figure for the state.

The committee has had the legislative question under consideration for some weeks and in October adopted a platform approving the control bill with these and other changes. Its vote this week was to propose "substantially the same type of legislation" as it went on record as favoring in October.

The committee accepted the resignation of Judge Amos L. Beaty as chairman, effective December 22, and elected J. D. Collett to succeed him. No one was named to fill the post of vice chairman formerly held by Collett.

Ickes Says Public Utility Is Effective *Control Method*

Washington, D. C.—A congressional declaration that the oil industry is a public utility is seen by Oil Administrator Harold L. Ickes as a "very effective way" to control the industry.

The administrator's views were made public this week in connection with a discussion of the waste of natural gas from stripper well operations in Texas, placed by Ickes at a billion cubic feet a day and criticized as being permitted while Texas authorities are asking for money for relief.

"Unless the state and the industry can control this waste," he declared, "I believe the federal government owes it to the people as a moral duty to step in and control it for them. "Pointing out that he had spoken of the Panhandle gas situation in his speech before the A. P. I. in Dallas in October, the administrator exhibited a growing impatience with the delay in stopping the waste and indicated that "not very much more" time would be given before he took action.

In view of the approach of Congress and the likelihood that the Cole Investigating Committee will recommend legislation for federal control, Ickes' ideas on the subject assume importance, since if the full committee considers legislation it is likely to call upon him for his opinions.

Asked whether the public utility idea, if applied, would be confined to production or would operate throughout the entire industry, he indicated that the latter was viewed as the end to be desired. "If made a public utility for any purpose," he asserted, "I should think it would apply all the way through the different branches of the industry. In making a street car company a public utility, you do not confine it to the electric current; I should think the same would apply to oil industry."

The suggestion that the industry should be made a public utility is neither new nor out of line with the administration viewpoint, according to observers in Washington, who predicate their opinion upon President Roosevelt's program to set up government owned power plants throughout the country. It is pointed out that there is little difference between operation of government electric plants and close regulation as a public utility of the next important power source.

The president is taking a close interest in the oil situation, it was indicated this week when he conferred at the White House with Representative Cole of Maryland, chairman of the investigating committee, who is now preparing his report. Cole's trip to the White House indicates that the findings of the committee were laid before the President and the recommendations to be included in the report discussed with him, he report will probably be submitted to Congress at the opening of the session next month.

Kingsville Field Hearing To Be Held January 7

Austin, Texas.—The Texas Railroad Commission Friday announced that a hearing would be held in Austin on January 7 to consider special rules for the spacing, drilling, completion and operation of wells in the New Kingsville field in Kleberg County.

Operators Need Not Pay Tax on State's Royalty

Austin, Texas.—The first court decision relating to payment of gross production taxes on royalty oil produced on state lands was handed down in the 126th District Court last week.

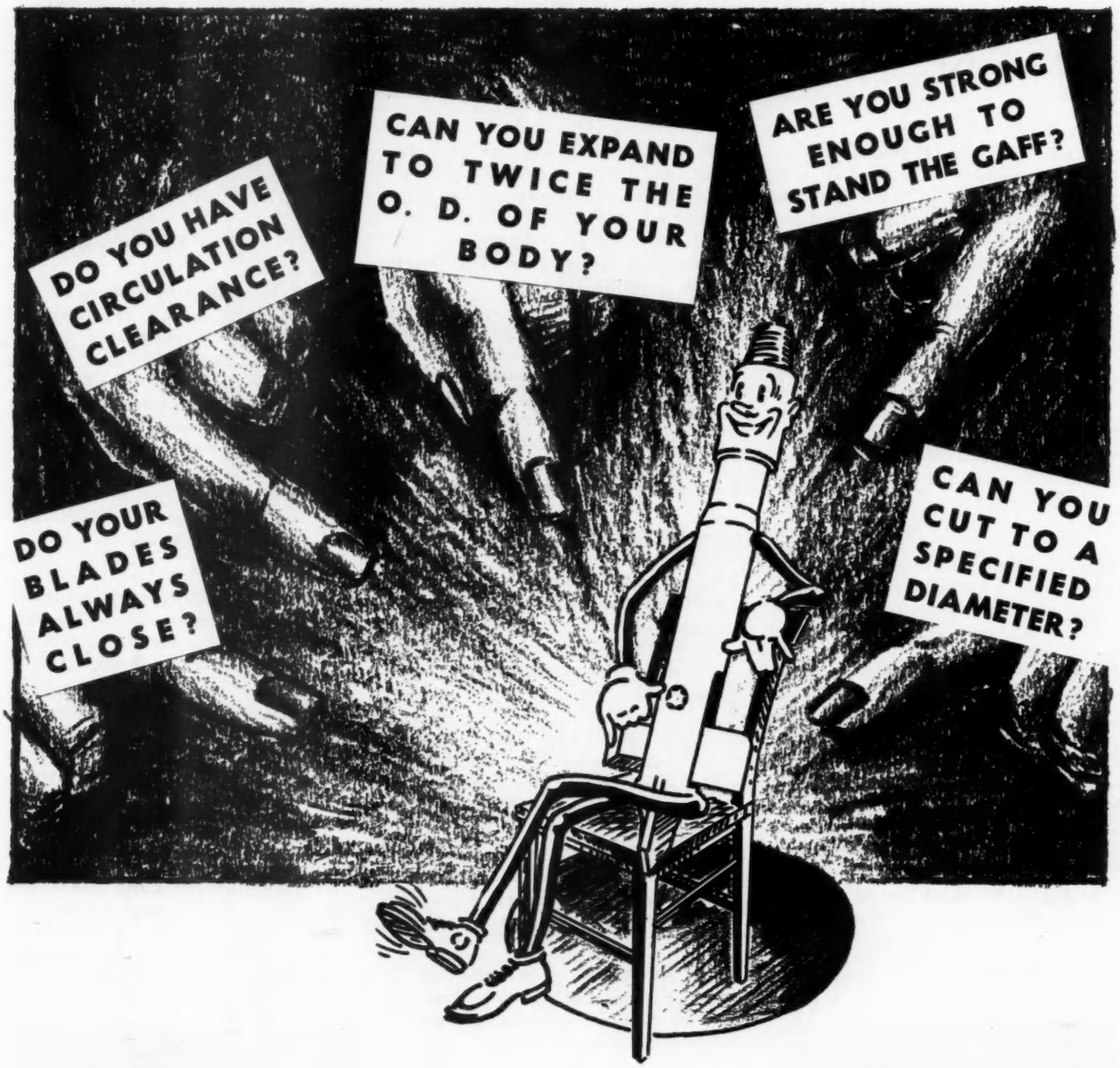
Judge W. F. Robertson granted an injunction to Rhoads Drilling Company and other operators with wells in the Sabine Riverbed in East Texas, prohibiting the state comptroller from assessing the tax on the state's share of the oil, and requiring that taxes so paid previously should be refunded. A total of $3,111 had been paid into the State Treasury which the companies recovered through the permanent injunction issued by the court.

The income from royalties on these riverbed lands is paid into the general revenue funds of the state. Income from other state properties, such as vacancies and unsurveyed school land, is generally diverted to the permanent school fund. Once placed in this fund, the monies can never be dispersed, and only the income may be used for the aid of the schools.

Defendants in the suit, styled Farrell & Company vs. J. W. Byrne, included State Comptroller George Sheppard, Attorney General James V. Allred, State Treasurer Charles Lockhart, Magnolia Pipe Line Company, and Sinclair-Prairie Oil Marketing Company.

Plaintiffs were Farrell & Company, Rhoads Drilling Company, McAlester Oil Corporation, U-Tex Oil Company, Amercian Liberty Oil Company, Blue Star Oil Company, Ruston Drilling Company, Sultana Oil Company and International Pipe Line Company.

The state is expected to appeal the case.


DO YOU HAVE CIRCULATION CLEARANCE?
CAN YOU EXPAND TO TWICE THE O. D. OF YOUR BODY?
ARE YOU STRONG ENOUGH TO STAND THE GAFF?
DO YOUR BLADES ALWAYS CLOSE?
CAN YOU CUT TO A SPECIFIED DIAMETER?

THIRD DEGREE methods have no terrors for the BAKER ROTARY WALL SCRAPER. You can "give it the works" and depend upon safe accomplishment of underreaming operations never before possible.

The strong body—the alloy steel blades which open by hydraulic pressure, and close positively when the job is complete—the amazing expansion — the safe, low-cost results — all combine to make BAKER WALL SCRAPERS profitable to use on every well.

BAKER Wall Scrapers will... Enlarge the area of oil sands; increase clearance for liners or casing; prepare formation for better cementing; help to straighten off-vertical holes; and do many other useful and profitable jobs described in your new Composite Catalog, or in the Bulletin which we will be glad to send you.

NRA

BAKER OIL TOOLS, INC.

SEE OUR DESCRIPTIONS IN THE COMPOSITE CATALOG

POST OFFICE BOX 609, HUNTINGTON PARK, CALIFORNIA

COALINGA • TAFT • HOUSTON • OKLAHOMA CITY • TULSA • NEW YORK CITY

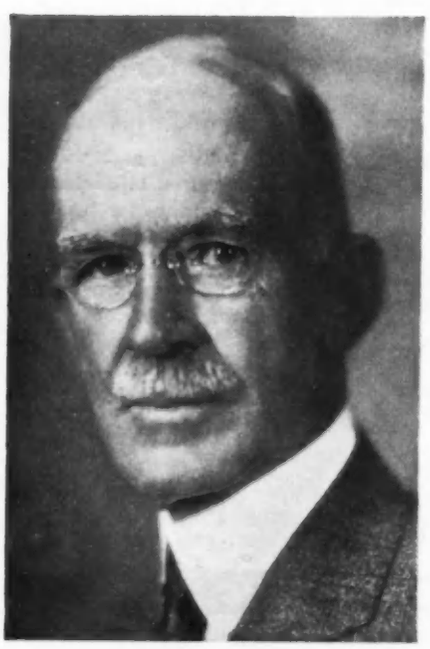
MEN IN THE INDUSTRY'S NEWS

WILLIAM K. WHITEFORD, who has been vice president of Barnsdall Oil Corporation, on January 1 will join The British American Oil Producing Company and The Toronto Pipe Line Company as executive vice president.

HOWARD D. ATHA, Mt. Pleasant, Michigan, has been elected president of the Oil and Gas Association of Michigan for the year 1935. Other officers elected for the year follow: Virgil R. D. Kirkham, Saginaw, vice president; Robert Atha, Mt. Pleasant, secretary; Floyd A. Calvert, Saginaw, and George B. Talbot, Saginaw, treasurers.

BYRON RIFE, independent operator of San Antonio, shortly will leave for Chicago on a business trip.

JAMES D. COLLETT has been elected chairman of the Planning and Coordination Committee effective December 22. He will succeed Judge Amos L. Beaty. No one was named to fill the post of vice chairman formerly held by Collett. At present Collett also is president of Mid-Continent Oil & Gas Association, a director of the American Petroleum Institute, and general chairman of Region No. 4 of the oil petroleum code. He was organizer of and is president of O'Keefe and Collett Corporation with headquarters in Fort Worth.



J. D. COLLETT

J. A. McCUTCHIN, who has been exploitation engineer in the Tulsa office of Shell Petroleum Corporation, has been transferred to Pampa, Texas, as district exploitation engineer. He succeeds S. F. Bolby, who is leaving for The Hague about January 5, 1935.

JAMES O. BANKS, J. R. McMahon, W. W. Andrews, H. L. Sisson and J. L. Hamilton, members constituting one of the reflection seismograph crews of Humble Oil & Refining Company, Houston, recently arrived in Venezuela, South America, to begin a seismic survey for Standard Oil Company of Venezuela.

E. B. DILLEY, scout and land man for Atlantic Oil Producing Company in the Texas Coastal region with headquarters at Houston, was spending a deferred vacation last week at Dallas and other North Texas points, where he has been located in former years while doing straight scout duty.

H. L. DAVIS has been made foreman in the western Kansas district for Williams Bros. Well Treating Corporation and is making headquarters at Hutchinson.

RODNEY DELANGE and George Coates, independent operators of San Antonio, are to spend the Christmas holidays in Central America.

A. E. NAVARRO, of Monterrey, N. L. Mexico, developing a block in the vicinity of Allende, Coah., Mexico, was in San Antonio several days.

J. P. RAYZOR, formerly with Shasta Oil Company at Wichita Falls, now is operating his own company, known as Solo Oil Company, Harvey Snider Building, Wichita Falls.

HOWARD COONLEY, president of Walworth Company, has been reelected president of the American Standards Association for 1935. Mr. Coonley, who represents the American Society of Mechanical Engineers, has served two terms as president. Frederick E. Moskovics, representing the Society of Automotive Engineers, was reelected vice president.

DR. A. F. CRIDER, former state geologist of Mississippi, and now a consulting geologist of Shreveport, Louisiana, is convalescing at his home after a fortnight's illness.

C. D. ALWORTH was recently transferred to Standard Oil Company of Venezuela's Quiriquire field as superintendent, replacing J. G. Nations, now superintendent of the Cumarobo field.

JOHN S. FULLER, sales engineer for Oil Well Supply Company, gave an illustrated talk on "Application of Gearing to Oil Field Production," at a meeting of the Mid-Continent Section, Petroleum Division of the American Institute of Mining and Metallurgical Engineers held in Tulsa on Tuesday evening, December 18. Following the address and discussion members of the section voted on a proposed constitution and by-laws and enjoyed a smoker afterward.

EUGENE B. GERMANY, president of the C. & G. Oil Company, Dallas, has been elected president of the Independent Petroleum Association of Texas. He also is mayor of Highland Park, an exclusive residential section adjoining Dallas. Fortified with ample geological education to launch a career as a consultant, Germany terminated six years of teaching in the public high school at Grand Saline, Texas, to enter the oil business in 1919. First practical experience as a geologist was in the Wichita Falls district. He joined the migration to East Central Texas when Mexia scored the first of a series of fields from the Woodbine sand horizon, and branched out into lease and royalty brokerage activity when consult-

EUGENE B. GERMANY

A Merry Christmas

to our many friends
in many fields and
in many offices
from the

Norvell-Wilder Man

If needed on the Christmas
Day Tour, he will wish
you Merry Christmas
right out on the lease

Norvell-Wilder
Supply Company

ing work subsided. A partnership was formed with the late Tom E. Cranfill, original head of the Independent Petroleum Association of Texas, in March, 1929. Their activities included a number of unsuccessful wildcats in East Texas, and also a profitable royalty investment in the Van area on the eve of the discovery wells' completion. Discovery of the giant East Texas field and development that followed literally put the partnership "over", as they held protection leases on what later proved to be a prolific portion of the structure. The C. & G. Oil Company was formed in June, 1933, to absorb the producing properties of the partnership, while Wanete Oil Company was later created to carry on occasional wildcat exploration work.

J. R. HICKMAN, accompanied by his wife and children, returned to Venezuela recently to take charge at Standard Oil Company of Venezuela's Guiria sea loading terminal.

K. D. WILLSON, of Rio Oil Company, Fort Worth, was in San Antonio several days ago.

HOWARD SMITH, a member of the sales staff of Well Equipment Corporation since its organization, has recently been transferred to field sales in the Gulf Coast, working out of the Houston headquarters.

H. L. CHAPMAN, for many years connected with the superintendent's office in Standard Oil Company of Venezuela's Quiriquire field, is on a vacation in the States.

MRS. KENNETH CRAVER has resigned her position in the personnel department of Humble Oil & Refining Company after five years in the Houston headquarters office.

GEORGE STEVENS, of Goldston and Stevens, geologists of Houston, was a business visitor in San Antonio last week.

DIED:

KARL F. GRIFFITH, 42, vice president and general counsel for Lone Star Gas Company, Dallas, died December 20 in a hospital at Waxahachie, Texas, from injuries sustained the night before when hit by an automobile on the highway near the latter city. Griffith was aiding D. A. Hulcy, assistant to the president of the company, in making minor car repairs on the side of the road when hit by an auto traveling at a high rate of speed. Both had attended a gas rate hearing at Waco, and were returning to Dallas.

Griffith was born in Lancaster, Ohio. Shortly after graduating from Ohio State University he joined the legal department of Ohio Fuel Supply Company, serving under L. B. Denning, who has since become head of Lone Star Gas Company. Griffith was a commissioned officer during the World War. He practiced law in Fort Worth during the first two years after being discharged after the Armistice, and then joined the legal staff of Lone Star Gas Company.

ROY A. MALONEY, 44, vice president of Maloney Tank Manufacturing Company and long a resident of Tulsa, died on Sunday, December 9, at his home, following a heart attack. His death was unexpected as apparently he had been in good health. Maloney came to Tulsa 21 years ago, had contacted the oil industry closely and was well known throughout the Mid-Continent area.

JACOB MOONEY GRUBER, 81, secretary-treasurer and manager of Concho Tool & Supply Company, San Angelo, Texas, died December 18 after an illness since last July. In early manhood Mr. Gruber was a millwright and began the building of rigs for oil tests in his native state, Pennsylvania, in 1878. In 1911 he moved to Oklahoma and entered the oil well supply business. He was with Interstate Pipe & Cordage Company at Tulsa for two years. In 1915 he joined Muskogee Tool Company and went to Ranger, Texas, for this concern in 1917. Mr. Gruber remained in Ranger for 10 years, then became manager of Union Wire Rope Company at Cisco. In November, 1929, he moved to San Angelo and since that time had been secretary-treasurer and manager of Concho Tool & Supply Company. His two sons are connected with the oil well supply business, H. R. Gruber of Tulsa is vice president and sales manager of Union Wire Rope Company, and W. M. Gruber is president of Concho Tool & Supply Company.

J. R. McCANDLIN recently died at his home in San Antonio. He was active in the Mid-Continent area and is credited with the discovery of the Bethany gas field of Louisiana. He later sold his holdings there to Gulf Production Company. He leaves a widow and two sons, James and Roy McCandlin.

6 Socony-Vacuum Officials Are To Retire December 31

New York.—With terms of service averaging 41 years, six executives of Socony-Vacuum Oil Company, Inc., will retire at the end of 1934. The veterans are terminating their long service voluntarily, on pension.

The men had been with the company from 33 to 48 years. William J. Higgs, former errand boy for John D. Rockefeller, Sr., in the early days of the petroleum industry, possessed the longest record with Socony-Vacuum. He had been active since 1887.

The retiring officials are Charles W. Hadley, chairman of the manufacturing committee of the corporation; F. H. Fitzgerald, director of Standard-Vacuum Oil Company, in charge of lubrication sales; Ernst Michaelson, executive of Socony-Vacuum's European organization; H. C. Cornforth, chairman of the board of Vacuum Oil Company, Pty. Ltd., of Melbourne, Australia; W. L. Lever, manager of the order and shipping department of Standard-Vacuum Oil Company, and Mr. Higgs, assistant treasurer of Socony-Vacuum Oil Company, Inc.

The six men had been closely identified with the growth of the company, and are retiring with the regrets of the management.

Trucks Paid Special Taxes Of $303,000,000 in 1933

Washington, D. C.—Last year this country's motor trucks paid $303,467,260 in special truck taxes, exclusive of personal property taxes, property taxes, and income taxes. This amounts to $94.50 per truck. Of this total by far the largest amount was in the form of state gasoline taxes, which amounted to $143,200,000.

The special truck taxes may be itemized as follows:

State gasoline taxes	$143,200,000
State registration fees	70,298,260
Federal excise taxes	61,936,000
Municipal license fees and gas taxes	17,500,000
Driver and trailer licenses	10,533,000
Total special taxes (not including property or income taxes)	$303,467,260

TOM COX, geologist of Corpus Christi, is finishing the blocking of a drilling block in Bee County.

C. B. BUNTE, of San Antonio, has been rather busy maintaining his office and watching his drilling operations in Harris County, where he recently opened a new field.

Make a mental note of what you require in a valve for your particular work and compare it with what we say of Darling, and then ask any user how nearly right you will be in equipping throughout with Darlings.

LONG WEARING
EASY OPERATING
QUICK REPAIR
LOW ULTIMATE COST

DARLING VALVE & MFG. CO.

Williamsport, Pa.

NEW YORK OKLAHOMA CITY HOUSTON

Mid-Continent Distributors:
INTERNATIONAL SUPPLY CO.
MOORLANE COMPANY

California Distributors:
HICKEY PIPE & SUPPLY COMPANY
3375 East Slauson Ave., Los Angeles, Calif.

DARLING
GATE VALVES

To our many friends everywhere we send sincere greetings for a joyous Holiday Season.

To those who favored us with business we express thanks and appreciation, and dedicate ourselves to maintain the prompt courteous service which will continue to merit your patronage.

We carry a complete line of Oil and Gas well supplies, and are exclusive Gulf Coast distributors for

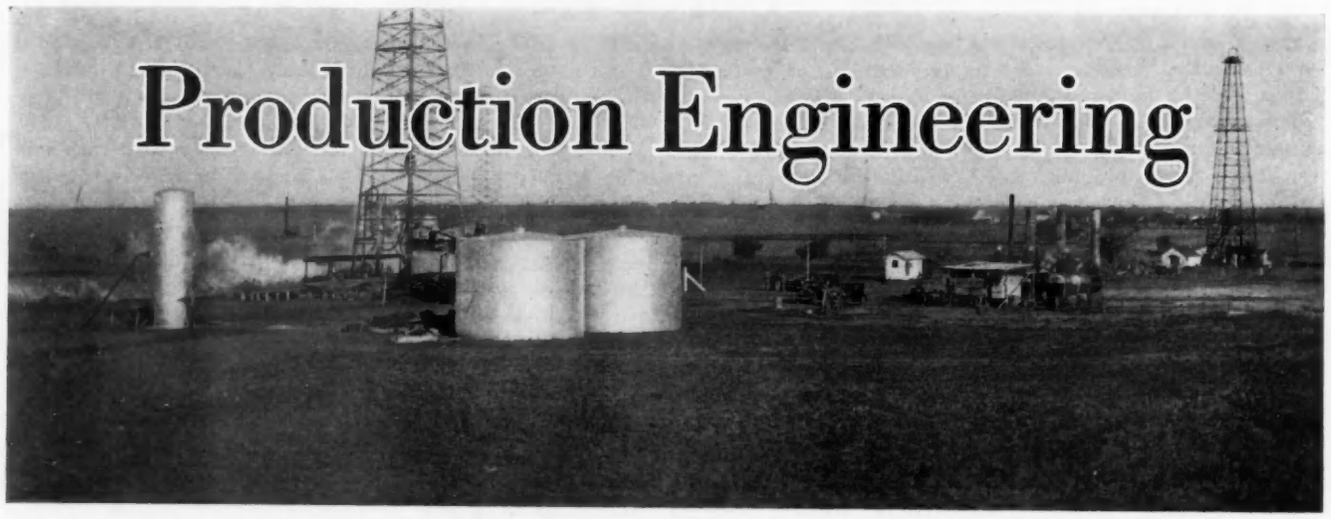
WILSON-SNYDER PUMPS
KEWANEE BOILERS
SIEVERS REAMERS
DRIFTMETER JR.
AMERICAN CABLE Pre-formed WIRE ROPE

WILSON SUPPLY COMPANY

1412 Maury St.
Houston, Texas

OIL and GAS WELL SUPPLIES

BRANCHES
Barbers Hill, Kilgore, Greta, Gladewater and Tomball, Texas; Lake Charles, Shreveport and Scott, La.



Electrical Pumping Progress in Kansas and Oklahoma

G. H. WECKEL

Kansas Gas & Electric Company
Wichita, Kansas

BEAM pumping always has been and still is the most universally used method of lifting oil. The early pumping installations were made with two-speed, double-rated, slip-ring motors belted to wooden rig fronts through sleeve-bearing countershafts, and as you naturally would expect, were not highly efficient units. The inefficiency of this type of installation increases rapidly with age. The jack and sampson posts tend to loosen up and the entire rig front pulls out of line on every stroke of the well. This especially is true on long stroke wells. It practically is impossible to accurately counterbalance a well of this type.

The great difference in power requirement between poorly installed wooden rig fronts and steel set in concrete was actually demonstrated by one instance in particular. A load check was made on several wells just before tearing out the old equipment and again just after the new rig front was installed, the same motor being used on the new installation. Reduction in power averaged approximately 40 percent.

Although a few operators still install wooden rig fronts, the present tendency is for pumping wells to be equipped with either all steel rig fronts, set in concrete, with roller bearing countershafts, or double-reduction geared units with roller bearings throughout.

The thing that has retarded greater application of pumping units has been the desire of so many operators to equip their wells with pumping equipment that could also be used for pulling rods and tubing. In order to perform all these operations, it was necessary to install two-speed, double-rated, slip-ring motors on standard rigs which, besides being in most cases too large for the pumping job, inherently are of lower efficiency and power factor than a squirrel-cage motor designed for the single operation of pumping the well.

Since 98 percent of the running time is spent in pumping the well, it is essential that the equipment have its greatest efficiency during the pumping operation, and that the servicing of the well be performed with equipment designed for that special purpose. To this end, there now are in use portable, high-speed pulling machines, mounted either on a tractor or a truck. One of these pulling outfits will take care of 12 or more wells.

Most of oil field equipment manufacturers now are making geared pumping units. However, the make of the unit is not as important as applying the proper size to a particular well. If too small a unit is installed, it might be impossible to properly counterbalance and obtain the desired length of stroke without forcing the unit beyond its best operating limits.

In selecting the motor for a pumping unit, consideration

CONTRARY to a general belief, the use of electric power for oil well pumping and drilling in Kansas is not new, but dates back 17 years to the boom days of the Augusta and El Dorado fields of 1917 and 1918. The electrification of the pumping wells in these two fields was the first major oil field electrification project in the United States. More than 2000 motors were installed on individual beam wells.

The accompanying article is an abstract of a paper entitled "Production Methods in Kansas and Oklahoma," which was delivered at the Sixth Annual Conference of the Petroleum Electric Power Club, December 4, 5 and 6, 1934, Beaumont, Texas.

should be given not only to the present well's characteristics, but in so far as possible to the future conditions as well. If it is possible to predict that the pumping load will not exceed 10 horsepower, even when taking potential, then a single-rated, constant-speed motor of 10 horsepower or less should be installed. Proration hinders the systematic operation of a lease, especially where the taking of potential requires excessive loads on the equipment. This necessitates changing counterbalance, crank pins, raises horsepower requirements and power consumption, and causes severe strains on sucker rods and other equipment.

To meet this condition, as well as higher loads due to water encroachment, the triple-rated, constant-speed motor has been brought out. The size which meets most all conditions is the 10/20/30-horsepower, 1200 revolutions per minute motor. Switches are provided so that the motor can be quickly changed from one rating to another and thus keep it operating at an average efficiency of close to 90 percent for all probable well conditions. In other words, it may only require 10 horsepower to operate the well continuously while getting the allowable production, but when the well is speeded up and the stroke lengthened to take potential, the horsepower requirements may be as high as the maximum rating of the motor and still have practically the same efficiency and power factor as at the lower load condition.

The above described motors are made weatherproof. The triple rating is obtained by taking a standard delta-wound motor of the maximum rating and by bringing out the proper connections to switches, procure a low and intermediate rating by grouping the windings in star and combination star-delta respectively. Practically, what occurs is that three different voltages are applied to the windings, the horsepower varying as the square of the voltage. For example, if the voltage is reduced to one half, the horsepower is reduced to one fourth. Since there is no change in the number of poles by this change in winding connections, the motor will operate at the same speed at all ratings.

Since this type motor has the same speed at all ratings, the different pumping speeds must be obtained by changing the size of the sheave on the motor shaft. On most wells a chang in pumping speeds should not be required so frequently, but this method can be used without too much inconvenience, especially since variations in production also can be obtained by four or five changes in length of stroke.

Gear Motors

Although gear motors have been used for several years in other industries to obtain slow drive-shaft speed from high-speed motors, it is only recently that this type of equipment began being applied to oil well pumping in the Mid-Continent field. The combination consists of a standard motor with the pulley and endbell removed and the gear case attached directly to the motor frame, the complete unit being mounted on slide rails. With a 1900 revolution per minute motor, shaft speeds of from 80 to 110 revolutions per minute are readily obtainable.

An oil company in the Oklahoma City field has adopted this type of equipment on 15 wells and is planning to similarly equip 10 more wells. Steel rig fronts with crank shaft chain sprocket are being used. The wells are pumpiing from 6400 feet through 2½-inch tubing with 1¼-inch working barrel. The production per well ranges from 90 to 165 barrels per day, with little or no water. The motor input varies from 8 to 14 Kw. The installation cost was approximately $1,000 per well, each unit being equipped with a 15/25/40 horsepower triple-rated gear motor.

Proper counterbalancing of electrically pumped beam wells cannot be over-emphasized. A good plan to follow is a system of checking the balance on each well at least once a month with an indicating ammeter. The swing of the ammeter hand should be the same when the rods are being lifted as when the weight is being lifted for minimum power consumption. A split core, portable type ammeter can be used and thus take care of a large number of wells with one instrument. All that is required to put the ammeter in the circuit is to clamp the core around one of the motor leads without shutting the well down. A record could be kept of these periodic balance checks and would be valuable in ways other than the savings effected by balancing the loads, especially where wells are pumped through a single lead line to the tank battery and individual well production cannot be watched. The variation in amperes from one reading to the next, well pumping the same stroke and speed, may be an indication of more water, worn out pump parts, low fluid level, etc., which might not have been noticed for some time except for the ammeter readings.

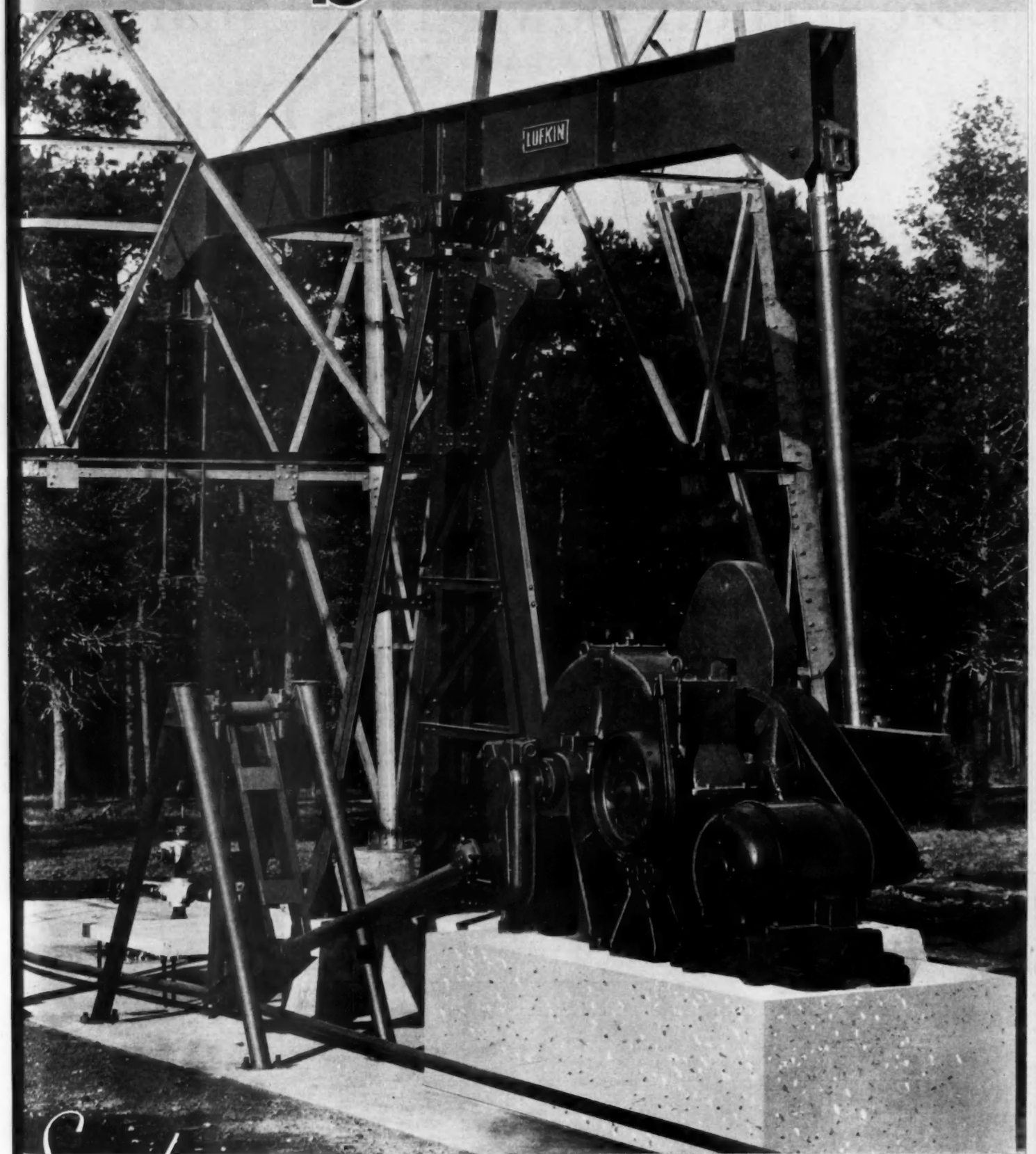
Operation Economies

A very appreciable saving can quite often be made by operating with reverse crank rotation. This is governed by the load on the well and by the angle made by the pitman and walking beam the moment the load is picked up. Generally, where the pitman is longer than normal, the well will operate with less horsepower in reverse, but the easiest way to determine which direction is the best is by trial, measuring the input in each case. As much as 10 percent saving in horsepower has actually been experienced. One company in Kansas operates all its wells with reverse crank rotation.

When part time operation is necessary on a group of wells, due to proration or depletion, a system of staggering the operating hours can be worked out without any increase in attendance labor and with a large saving in power cost by reduction in horsepower billing load. The starting and stopping of the wells can be performed automatically by installing a time clock relay on each motor and setting the clock to start and stop the well at any time desired. This arrangement is being tried out on a Central Kansas lease at the present time. The cost of a time clock relay installed is less than $20.

Burning out of pumping motors due to overload is entirely unnecessary if equipped with the proper overload protective device. Thermal over-load relays, with which motors are now equipped, can be set at a reasonable over-load value when the unit is installed the motor will always kick out at that value. The over-load device on the motor will act to shut the well down if the rods should part and thus save possible damage to other equipment. The unbalanced condition resulting from rod breakage establishes high load peaks in the motor circuit which in turn results in the tripping of the motor starter.

LUFKIN 3 WELL HOOK-UP



TYPICAL LUFKIN INSTALLATION FOR THREE WELL HOOK-UP WITH G.E. ELECTRIC MOTOR DRIVE. ANY TYPE PRIME MOVER MAY BE USED.

Specify — **LUFKIN** *Pumping Units*

FKIN UNITS ARE MANUFACTURED IN LUFKIN, TEXAS BY THE LUFKIN FOUNDRY AND

[Production Engineering]

Mechanical Down Time Analysis *In Greater Seminole* Advances Pumping Technique

ARTICLE V

Engines, Miscellaneous Equipment and Summary

I. F. BINGHAM

Professor, Petroleum Engineering, University of Oklahoma

THIS article, the last of a series of five on the analysis of mechanical down time on pumping wells in the Greater Seminole area, deals with engines, miscellaneous surface equipment and a general summary of the entire series. The summary shows that the facts brought out by this investigation are of considerable value to the industry.

Engines

No specific campaign was launched to decrease engine downtime other than fairly close supervision as to care; choice of oil; and careful adjustment of outboard bearing for the purpose of maintaining proper alignment of crank shaft. A considerable saving was also effected by having all magnetos serviced at the central machine shop. Field men were instructed to make no repairs in the field, but in case of ignition trouble to remove the magneto and exchange it for one which had been serviced and checked.

Table 12 is a summary of all engine down time, fourth quarter 1929, to fourth quarter 1933, inclusive.

Figure 12, curve (1), shows graphically total engine down time as taken from Table 12. A comparison of curves (2) and (3) of this graph emphasize the fact that 25-30 horsepower engines are too small for satisfactory service at these 4200-foot wells. The curve was not extended further because at this time some 25-30-horsepower

TABLE 12

SUMMARY OF ENGINE DOWN TIME—ALL MAKES GAS ENGINES

Fourth Quarter 1929 to Fourth Quarter 1933, Inclusive

QUARTER	No. in Service	Bearing	Shaft	Ignition	Engine	Miscellaneous	Total
4th, 1929	300	163	89	122	818	1140	2333
Average per well, per quarter	...	0.54	0.30	0.41	2.73	3.80	7.77
1st, 1930	329	269	36	197	835	1070	2407
Average per well, per quarter	...	0.82	0.11	0.60	2.54	3.26	7.33
2nd, 1930	331	182	43	103	547	619	1495
Average per well, per quarter	...	0.55	0.13	0.31	1.65	1.87	4.51
3rd, 1930	331	96	14	202	542	1169	2023
Average per well, per quarter	...	0.29	0.04	0.61	1.65	3.53	6.11
4th, 1930	329	79	163	134	1361	151	1889
Average per well, per quarter	...	0.24	0.50	0.41	4.14	0.46	5.75
1st, 1931	329	226	50	230	122	1421	2050
Average per well, per quarter	...	0.69	0.15	0.70	0.37	4.32	5.23
2nd, 1931	326	134	242	127	298	1380	2182
Average per well, per quarter	...	0.41	0.74	0.39	0.91	4.23	6.68
3rd, 1931	329	425	94	118	403	1157	1716
Average per well, per quarter	...	1.29	0.28	0.36	1.23	2.06	5.12
4th, 1931	329	158	84	180	434	427	1284
Average per well, per quarter	...	0.47	0.26	0.55	1.32	1.30	3.90
1st, 1932	322	....	....	240	1368	194	1802
Average per well, per quarter	...	....	....	0.75	4.25	0.60	5.61
2nd, 1932	322	....	....	154	2230	84	2467
Average per well, per quarter	...	....	....	0.48	6.92	0.26	7.67
3rd, 1932	324	....	....	146	2354	475	2976
Average per well, per quarter	...	....	....	0.45	7.26	1.47	9.18
4th, 1932	324	....	....	341	1908	259	2508
Average per well, per quarter	...	....	....	1.05	5.88	0.80	7.73
1st, 1933	334	....	....	211	2731	146	3089
Average per well, per quarter	...	....	....	0.63	8.18	0.44	9.25
2nd, 1933	336	....	....	168	2244	46	2458
Average per well, per quarter	...	....	....	0.50	6.68	0.14	7.33
3rd, 1933	336	....	....	199	1414	161	1774
Average per well, per quarter	...	....	....	0.59	4.20	0.48	5.28
4th, 1933	331	....	....	233	1536	154	1922
Average per well, per quarter	...	....	....	0.70	4.64	0.46	5.80

KOBE
HYDRAULIC DEEP WELL PUMP

The Kobe Hydraulic Deep Well Pump is a complete fluid operated pumping unit consisting of all the necessary equipment required to produce oil from wells of any depth under widely varying conditions.

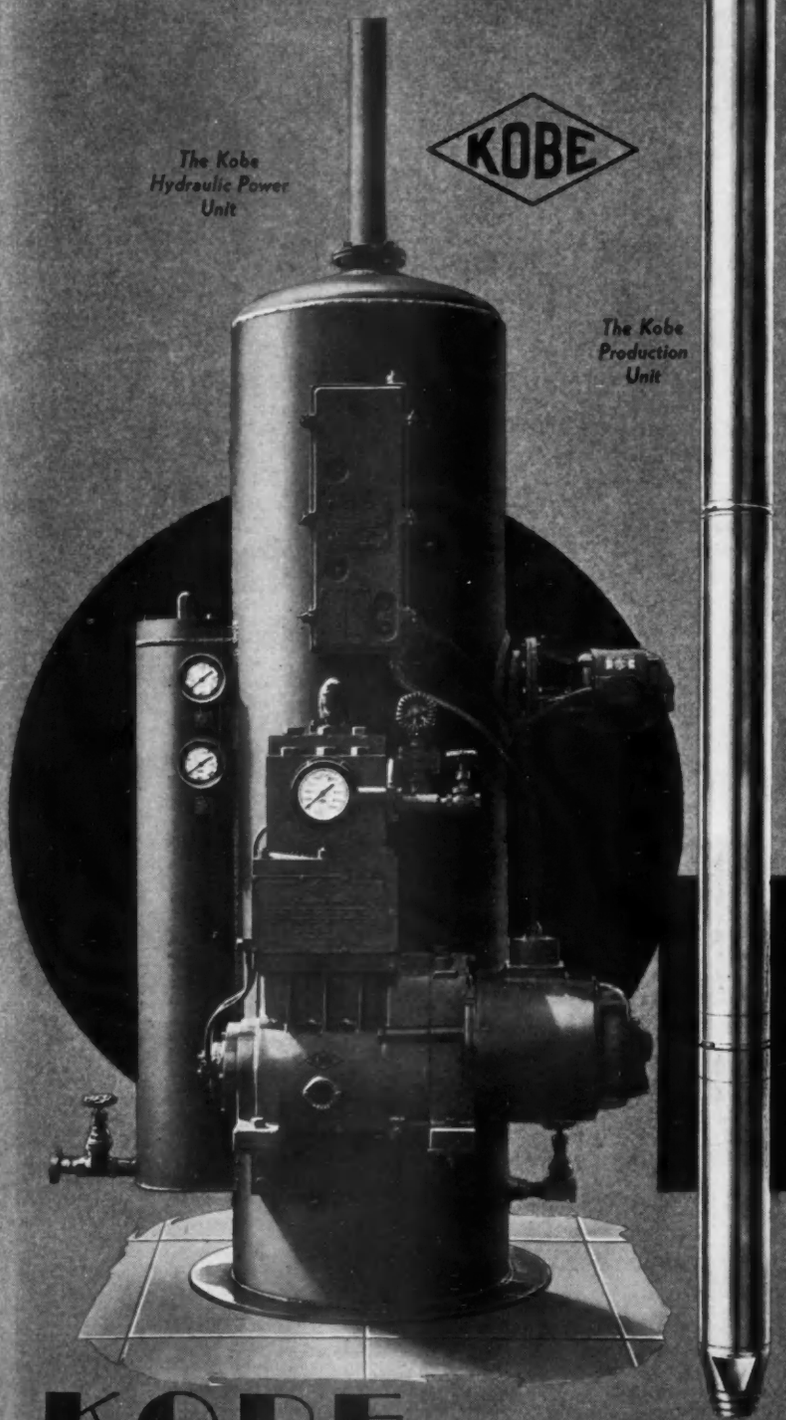
It embodies two main subdivisions: the surface, or Hydraulic Power Unit; and the subsurface, or Production Unit.

The Hydraulic Power Unit consists of a motor, triplex pump, operating switch, and filter, completely enclosed and self-contained, which may be located on the derrick floor or at any convenient point nearby. It is completely weather and dust proof, requiring no additional housing or special foundation.

The Production Unit consists of an engine and a production pump, combined into a single unit. The well tubing is set as a permanent string, with a shoe and gas anchor at the bottom; the Production Unit being attached to the lower end of the pressure tubing and seating in this shoe.

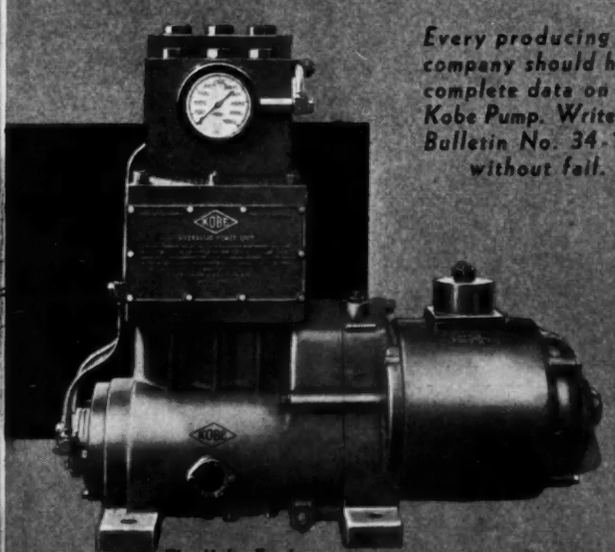
A Kobe installation includes complete pumping equipment with the single exception of tubing; all auxiliaries such as gas anchor, tubing head control valves, et cetera, being supplied so that there is but one responsibility for its installation and operation.

It is adapted to individual well installations, or for producing a group of wells from a central power unit; developing overall efficiencies of from 50% to 75%; and reducing power, maintenance, and general operating costs to new, all time lows.



The Kobe Hydraulic Power Unit

The Kobe Production Unit



The Kobe Triplex Pump

Every producing oil company should have complete data on the Kobe Pump. Write for Bulletin No. 34-100 without fail.

KOBE, INCORPORATED

(Pronounced KŌB)

. . . Manufacturers of KOBE Heat-Treated Screen Casing and KOBE Pumper . . . . .

3040 EAST SLAUSON AVENUE . . . HUNTINGTON PARK, CALIFORNIA, U. S. A.

TABLE 14

SUMMARY OF CLUTCH AND COUNTERSHAFT DOWN TIME—ALL MAKES

Fourth Quarter 1929 to Fourth Quarter 1933, Inclusive

QUARTER	No. in Service	Shoes	Outboard Bearing	Miscellaneous	Total
4th, 1929	300	79	89	929	1097
Av. per well, per quarter	...	0.24	0.30	3.09	3.65
1st, 1930	329	48	118	924	1087
Av. per well, per quarter	...	0.15	0.36	2.81	3.31
2nd, 1930	331	94	142	756	991
Av. per well, per quarter	...	0.28	0.43	2.28	2.99
3rd, 1930	331	47	58	331	437
Av. per well, per quarter	...	0.15	0.17	1.0	1.32
4th, 1930	329	65	70	187	322
Av. per well, per quarter	...	0.20	0.21	0.57	0.98
1st, 1931	329	359	115	746	1118
Av. per well, per quarter	...	0.79	0.35	2.27	3.40
2nd, 1931	326	182	108	305	595
Av. per well, per quarter	...	0.56	0.33	0.93	1.82
3rd, 1931	329	175	50	312	538
Av. per well, per quarter	...	0.53	0.15	0.95	1.63
4th, 1931	329	206	96	506	785
Av. per well, per quarter	...	0.63	0.29	1.54	2.39
1st, 1932	322	....	....	....	751
Av. per well, per quarter	...	....	....	....	2.34
2nd, 1932	322	....	....	....	972
Av. per well, per quarter	...	....	....	....	3.02
3rd, 1932	324	....	....	....	864
Av. per well, per quarter	...	....	....	....	2.67
4th, 1932	324	....	....	....	763
Av. per well, per quarter	...	....	....	....	2.36
1st, 1933	334	....	....	....	898
Av. per well, per quarter	...	....	....	....	2.69
2nd, 1933	336	....	....	....	890
Av. per well, per quarter	...	....	....	....	2.65
3rd, 1933	336	....	....	....	1020
Av. per well, per quarter	...	....	....	....	3.04
4th, 1933	331	....	....	....	490
Av. per well, per quarter	...	....	....	....	1.47

Beginning with first quarter 1932, only total downtime was recorded for clutches and countershafts.

engines were converted to 40 horsepower. These curves are representative since seven makes of oil field gas engines are included in the group.

The fact that the down time curves do not rise with increased age of the engines is remarkable. Engines are not replaced as are sucker rods and pumps.

The increase in down time for 1932 is explained by the fact that a very competent engine repairman was laid off because of the depression.

The decline in 1933 is accounted for by the fact that an engine repairman was employed and by the purchase of a well servicing unit. A servicing unit protects the pumping engine from the abuse which is undergone in running rods and tubing. The cost of the first servicing unit for part of this group of wells, was saved within six months because of greater speed in servicing the well and decreased down time for engines and surface equipment at the well.

Beam Hangers

Beam hanger downtime was carried as a separate item for the years 1930 and 1931. During this time a nice reduction in down time was shown largely through selection of type used. Table 13 shows beam hanger down time for the years 1930 and 1931.

Clutches and Countershafts

Table 14 is a summary of all clutch and countershaft down time a large amount of countershaft trouble is traceable directly and indirectly to the difficulty of making proper shoe adjustments. When one shoe is adjusted to carry more of the friction load than the others, the service of the shoes is decreased and a repeated flexing of the shaft occurs. To overcome this trouble as far as possible, field men were instructed to make adjustments as follows: With clutch disengaged back off shoes; engage clutch and advance all shoes at equal rates until they are in contact with friction surface; disengage clutch and advance all shoes one quarter or one half turn of the adjusting screw.

Surface Equipment

Surface equipment as defined in this paper includes the

TABLE 13

SUMMARY OF BEAM HANGER DOWN TIME—ALL MAKES

Fourth Quarter 1929 to Fourth Quarter 1933, Inclusive

QUARTER	No. in Service	Hanger Head	Hanger Rodster	Adapter	Plates	Miscellaneous	Total
4th, 1929	...	....	....	....	....	....	....
Average per well, per quarter	...	....	....	....	....	....	....
1st, 1930	353	....	....	....	....	338	338
Average per well, per quarter	...	....	....	....	....	0.96	0.96
2nd, 1930	374	....	....	....	....	293	293
Average per well, per quarter	...	....	....	....	....	0.78	0.78
3rd, 1930	348	....	48	7	29	125	218
Average per well, per quarter	...	....	0.14	0.05	0.08	0.36	0.63
4th, 1930	348	....	70	....	10	38	118
Average per well, per quarter	...	....	0.20	....	0.03	0.11	0.34
1st, 1931	334	12	38	55	7	17	130
Average per well, per quarter	...	0.04	0.11	0.16	0.02	0.05	0.38
2nd, 1931	331	....	12	22	5	46	84
Average per well, per quarter	...	....	0.04	0.07	0.01	0.14	0.25
3rd, 1931	334	17	22	17	7	101	163
Average per well, per quarter	...	0.05	0.06	0.05	0.02	0.30	0.49
4th, 1931	336	24	24	10	10	86	154
Average per well, per quarter	...	0.07	0.07	0.03	0.03	0.26	0.46
*1st, 1932	...	....	....	....	....	....	....
Average per well, per quarter	...	....	....	....	....	....	....

*Beam hangers were carried as miscellaneous downtime under "surface equipment" during 1932–1933.

ARTHUR PENICK
PRESIDENT-SALES MGR
KIRBY PENICK
SECY-TREAS
There's a thousand 'flowery' ways to wish you the Seasons Greetings but the best we can think of is the old fashioned
Merry Christmas
Oil Center Tool Co.
Houston, Texas
DICK TIBBS
SOUTH TEXAS
JIM HILLMAN
GULF COAST
WALTER BURKE
W. TEX-NEW MEX.
JIM MORGAN
OKLA-KANSAS
BYRON SMITH
LA-ARK.
HUGH START
PLANT SUPT.
HOLMES SMITH
CHIEF INSPECTOR

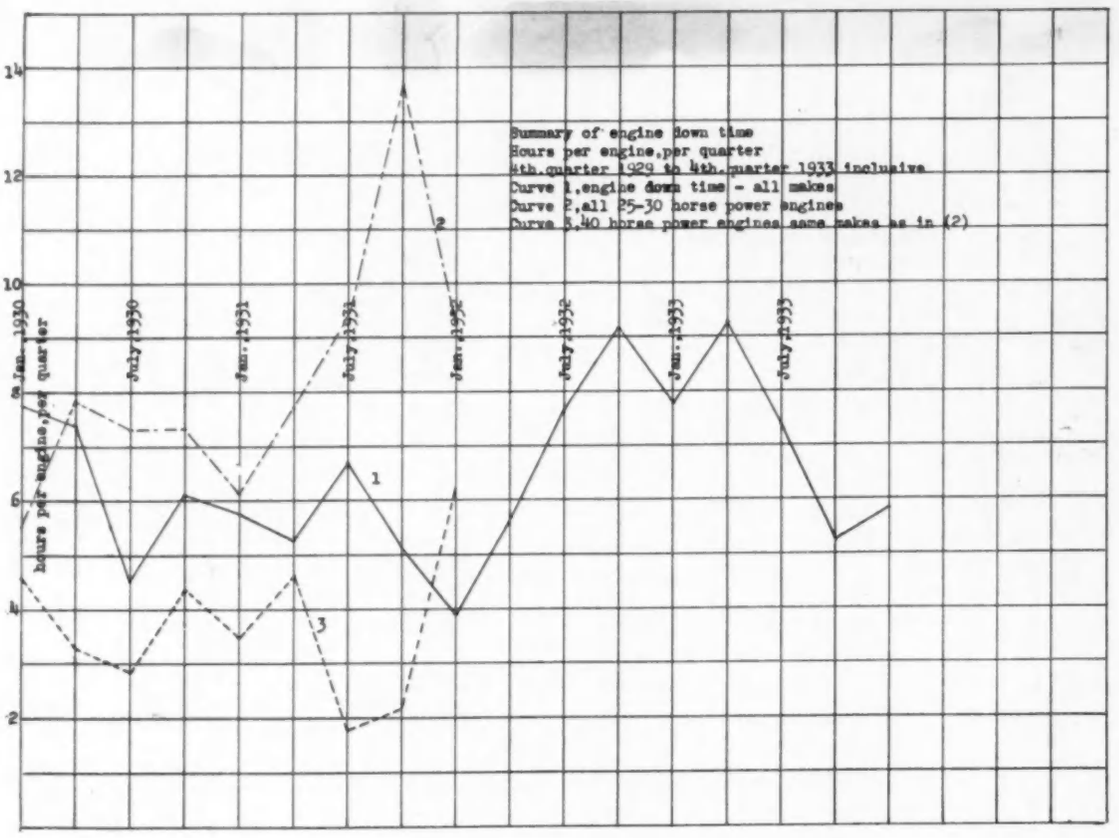


FIGURE 12

TABLE 15

SUMMARY OF SURFACE EQUIPMENT DOWN TIME

QUARTER	No. of Wells	Rig	Counter Balance	Band Wheel	Pitman	Walking Beam	Sampson Post	Jack Post	Stuffing Box	Wrist Pin	Lead Lines	Miscellaneous	Total
4th, 1929	334	540	182	509	132	29	130	65	26	38	182	1908	3742
Average per well, per quarter	...	1.62	0.55	1.52	0.40	0.09	0.39	0.19	0.08	0.11	0.55	5.71	11.20
1st, 1930	338	463	283	252	122	29	324	104	55	79	257	518	2484
Average per well, per quarter	...	1.37	0.84	0.75	0.36	0.09	0.96	0.31	0.16	0.23	0.76	1.53	7.35
2nd, 1930	338	1037	46	307	43	74	94	96	10	31	53	1162	2952
Average per well, per quarter	...	3.06	0.14	0.91	0.13	0.22	0.28	0.28	0.03	0.09	0.16	3.44	8.73
3rd, 1930	334	1426	161	257	192	233	62	65	2	149	24	902	3473
Average per well, per quarter	...	4.27	0.48	0.77	0.58	0.70	0.19	0.19	0.01	0.45	0.07	2.70	10.40
4th, 1930	334	823	139	278	170	103	130	70	12	194	12	1726	3658
Average per well, per quarter	...	2.47	0.42	0.83	0.51	0.31	0.39	0.21	0.04	0.58	0.04	5.17	10.95
1st, 1931	334	156	230	204	194	115	34	214	24	189	48	135	1532
Average per well, per quarter	...	0.47	0.69	0.61	0.58	0.34	0.10	0.64	0.07	0.57	0.14	0.40	4.57
2nd, 1931	326	58	163	240	96	103	96	101	19	154	199	890	2119
Average per well, per quarter	...	0.18	0.50	0.74	0.29	0.32	0.29	0.31	0.06	0.47	0.61	2.73	6.49
3rd, 1931	326	24	110	259	89	216	98	178	31	245	113	365	1728
Average per well, per quarter	...	0.07	0.34	0.79	0.27	0.66	0.30	0.55	0.10	0.75	0.35	1.12	5.29
4th, 1931	331	288	127	290	91	94	60	125	24	216	130	377	1822
Average per well, per quarter	...	0.87	0.38	0.88	0.27	0.28	0.18	0.38	0.07	0.65	0.39	1.14	5.50
1st, 1932	346	403	103	202	192	101	79	79	31	91	....	468	1750
Average per well, per quarter	...	1.16	0.30	0.58	0.56	0.29	0.23	0.23	0.09	0.26	....	1.35	5.06
2nd, 1932	343	818	72	173	50	50	48	53	67	158	....	946	2436
Average per well, per quarter	...	2.38	0.21	0.50	0.15	0.15	0.14	0.15	0.20	0.46	....	2.76	7.06
3rd, 1932	346	230	113	151	120	113	55	46	58	173	....	269	1375
Average per well, per quarter	...	0.67	0.33	0.44	0.35	0.33	0.16	0.13	0.17	0.50	....	0.78	3.97
4th, 1932	341	283	194	194	139	230	110	43	22	108	....	1039	2364
Average per well, per quarter	...	0.83	0.57	0.57	0.41	0.67	0.32	0.13	0.06	0.32	....	3.05	6.93
1st, 1933	341	199	62	223	192	218	98	118	70	218	....	763	2162
Average per well, per quarter	...	0.58	0.18	0.65	0.56	0.64	0.29	0.35	0.21	0.64	....	2.24	6.34
2nd, 1933	341	833	103	192	218	137	31	259	38	94	....	746	2652
Average per well, per quarter	...	2.44	0.30	0.56	0.64	0.40	0.09	0.76	0.11	0.28	....	2.19	7.77
3rd, 1933	341	384	122	338	173	168	216	149	55	82	....	523	2210
Average per well, per quarter	...	1.13	0.36	0.99	0.51	0.49	0.63	0.44	0.16	0.24	....	1.53	6.48
4th, 1933	336	50	67	132	91	264	252	79	46	31	....	1313	2326
Average per well, per quarter	...	0.15	0.20	0.39	0.27	0.79	0.75	0.24	0.14	0.09	....	3.91	6.92

1932–1933 Lead Lines was included in Miscellaneous.

items shown in Table 15. Figure 13 is a graphic representation of the data taken from Table 15. Although there is no sharp decline for this curve as for rods and pumps, there is a nice decrease despite the increasing age and prolonged service of the equipment.

Rig Fronts. It is difficult to measure directly the loss due to unstable rig fronts. It is definitely known that unstable rig fronts transmit destructive vibration and shock loads to other members of the pumping unit. These vibratory loads are particularly damaging to rod strings. In many instances rod trouble has been reduced to a minimum by merely eliminating vibration in the rig front.

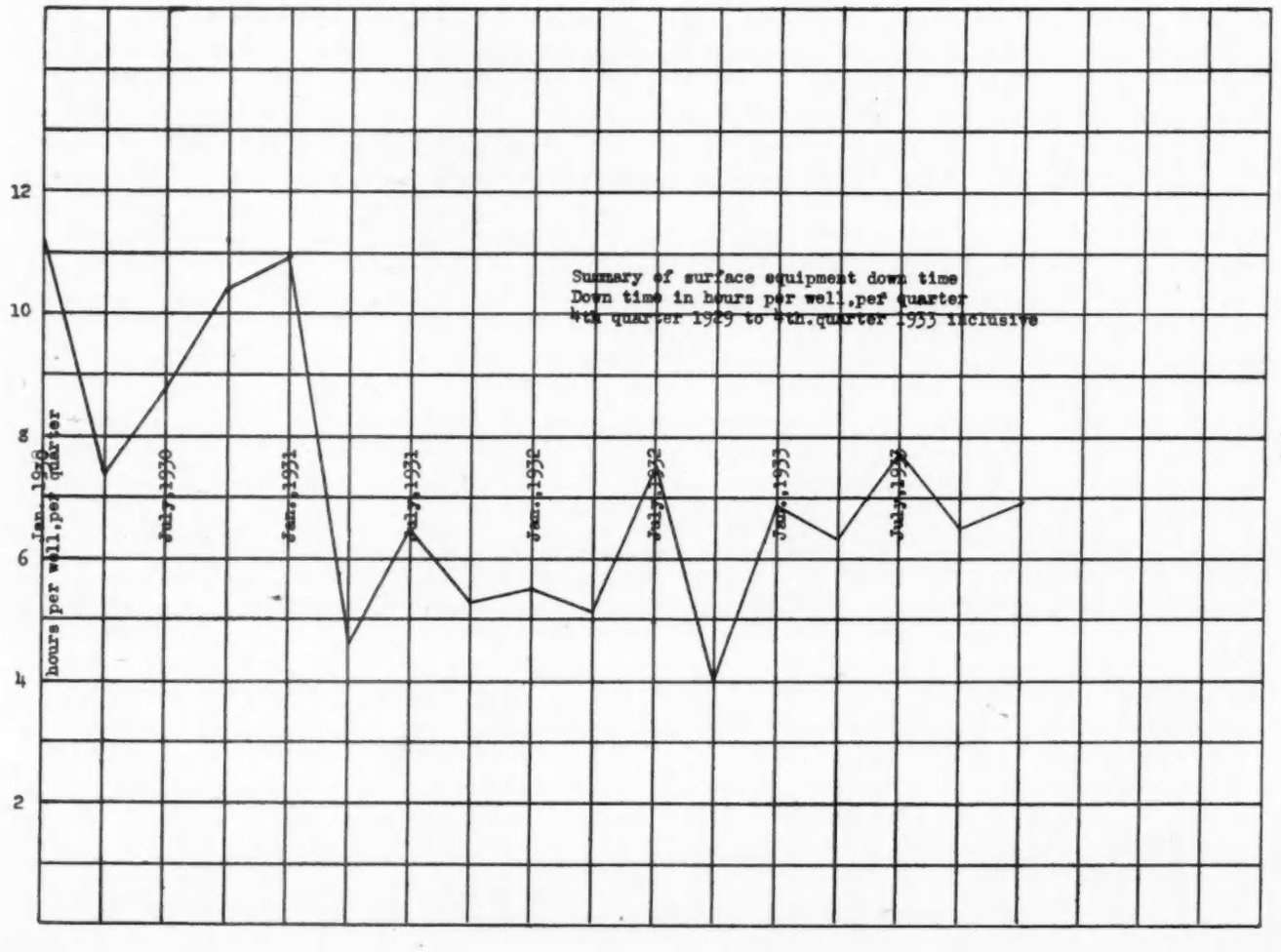
In making estimate for rig front replacement it is the prevailing practice to recommend steel pitman, walking beam, jack posts, and A-type Sampson post. Sampson and jack posts to be set directly upon concrete base instead of wood main sill. Considerable saving may in some cases be made by recommending a make of steel walking beam which will permit salvaging the side irons and saddle from the wooden walking beam.

Some engineers in this area recommend the purchase of walking beams having end and center bearings in a straight line and remodeling of the old beams to meet this condition. On a field test at one well 22 horsepower was required for a given number and length of strokes before making this change and 20 horsepower after making the change. The conclusion was that the additional horsepower was consumed in lateral stress upon the rig front.

Counterbalances. Counterbalances are essential to good pumping performance in this area. The function of the counterbalance is to smooth the pumping cycle by decreasing the normal engine load on the up stroke of the polish rod and by placing a load upon the engine on the down stroke of the polish rod. This in turn will reduce shock loads upon the rod string by minimizing the tendency of the prime mover to begin rod stress reversal at an increased speed.

When installing any of the various types of counterbalances at a well it is desirable to have some fairly definite knowledge concerning the well as to loading. The use of the dynamometer has been valuable in this respect. It must be remembered, however, that interpretation of dynamometer readings are influenced by so many factors at the well that these readings furnish a basis for estimation rather than an accurate explanation for any single variable. If it is known what pump displacement and what length and speed of stroke is required for the fluid to be handled, a dynamometer card should be taken under these conditions, prior to installing counterbalance. Successive cards may be taken as weights are added or removed and as the counterbalance is set ahead or retarded. For most conditions in this area the counterbalance should be between the seven and eight o'clock position when the polish rod is at the top of its stroke. When the best card possible is obtained, that is when the card most nearly approaches a parallelogram, it is assumed that the best adjustment for the given condition has been secured.

FIGURE 13



Stuffing Box. Stuffing box trouble arises mainly from the following causes:

1. Corrosive water pit the polish rod. This rough rod rapidly destroys the stuffing box rubbers.

2. Although beam hangers in this area are designed to approach straight lift, there is sufficient deflection from the verticle to hasten wear of the rubbers on one side.

3. Proper stuffing box lubrication is difficult to accomplish.

4. Wells which "blow off" have the rubbers dry following which the rubbers rapidly burn out.

Study of this problem has eliminated a considerable amount of stuffing box trouble. Some of the remedial measures follow:

1. Installation of a less corrosive polish rod.

2. Substitution of soft, tough rubbers for the hard brittle rubbers.

3. Rebabbitting stuffing boxes in the field.

4. Installation of a grease lubricator in the wells that blow off.

5. Oil-bath stuffing boxes are satisfactory except where polish rod is too deeply pitted.

6. A stuffing box adapter or wobbler which permits the stuffing box to adjust itself to the polish rod travel thereby eliminating much stuffing box and rubber wear. This device also eliminates much vibration which materially increases the service of lead lines.

Summary, All Mechanical Down Time

Table 16 summarizes all mechanical down time for this group of wells from the fourth quarter of 1929 to the fourth quarter of 1933 inclusive. Figure 14 is a graphic representation of the same material. Curves for pump and sucker rod downtime have been imposed upon this graph in order to show how nearly these curves parallel the curve for all mechanical down time for this group of wells.

The achievement represented by these curves is remarkable in view of the following facts:

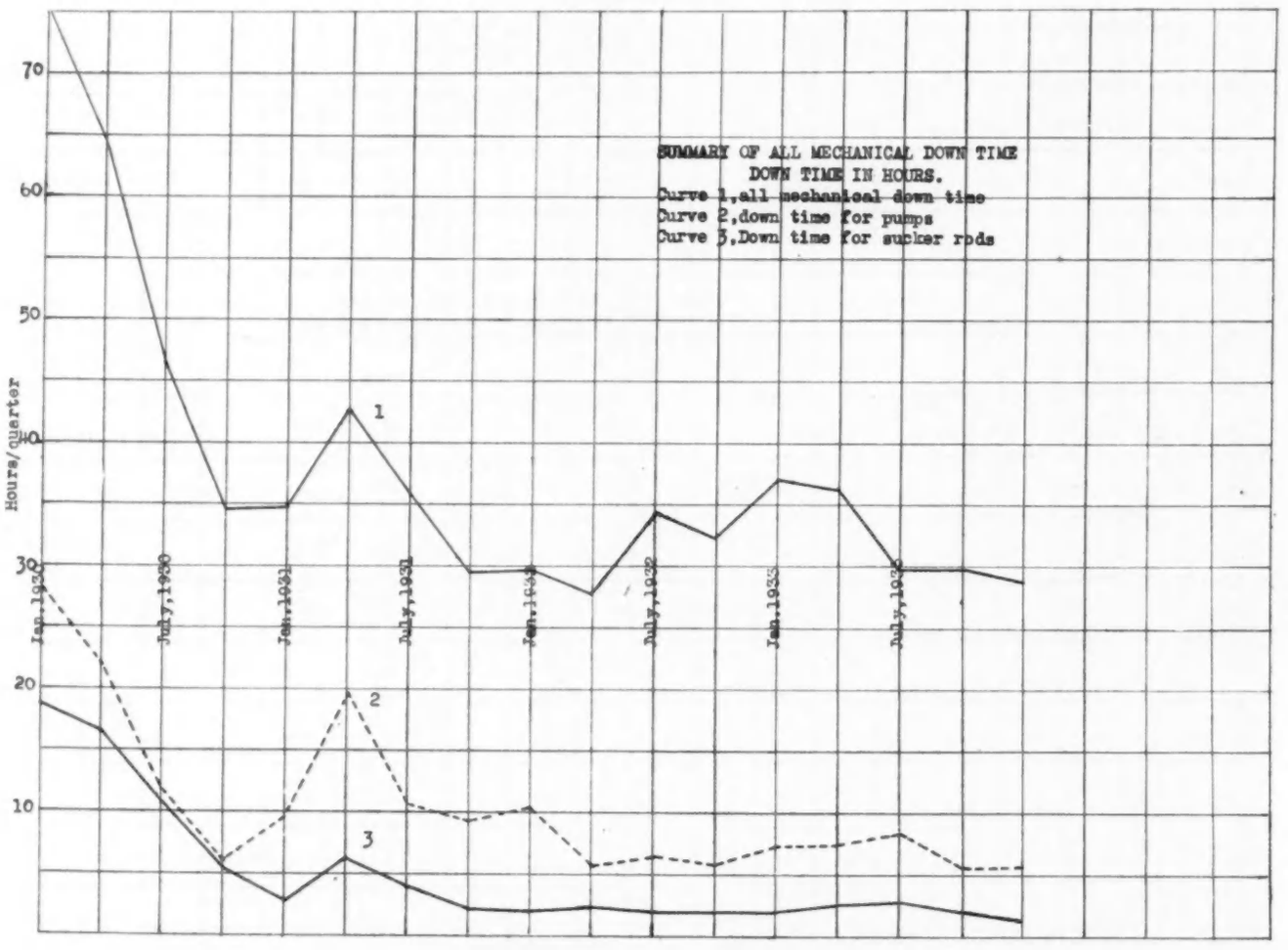
1. Proration cannot be considered as a factor in reducing downtime because progressive increase in salt water augmented the difficulties of pumping and made it necessary to continue pumping fluid at about the same rate in order to permit the wells to make their allowables.

2. As time progressed the equipment at the well was depreciating because of age. The major portion of the equipment at these wells was placed in service at the time the wells were equipped for pumping.

3. The depression prevented, in many instances changes or installations that would have shown a greater ultimate saving than the immediate expenditures necessary to put the well in proper mechanical condition. I have in mind one well in this group at which a belt was kept in service more than a year after it should have been discarded. The repair hours at the prevailing wages for this belt would have purchased five new belts.

4. By 1932 the organization had been cut to considerably

FIGURE 14



1934

A Very Merry Christmas

1935

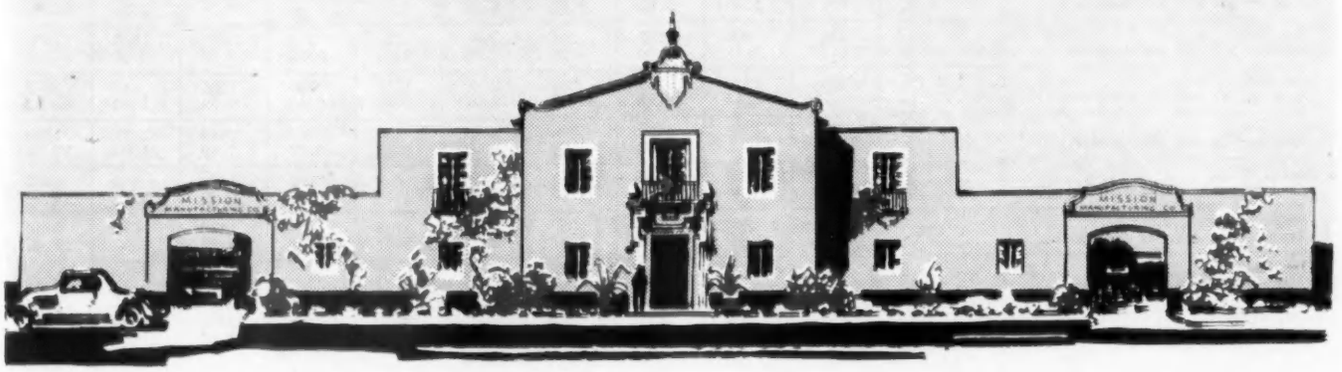
A Happy New Year

from us who are planning
to dedicate to you the

NEW HOME

OF THE

MISSION MANUFACTURING CO.



MISSION MANUFACTURING CO.

2416 RAILROAD AVENUE HOUSTON, TEXAS

TABLE 17

LABOR SAVED FOR ALL MECHANICAL DOWN TIME

Fourth Quarter 1929 to Fourth Quarter 1933, Inclusive

	4th Quarter, 1929	Year, 1930	Year, 1931	Year, 1932	Year, 1933	Total
Repair hours, 1929 rate	25,087	100,348	100,348	100,348	100,348	401,392
Man hours (repair hours x 3)	75,261	301,044	301,044	301,044	301,044	1,204,176
Cost of labor, $.48 per hour	$36,125.28	$144,501.12	$144,501.12	$144,501.12	$144,501.12	$578,004.48
Actual repair hours	25,087	60,644	44,852	40,265	44,094	214,942
Actual man hours (repair hours x 3)	75,261	181,932	134,556	120,795	132,282	644,826
Cost of labor, $.48 per hour	$36,125.28	$87,327.36	$64,586.88	$57,981.60	$63,495.36	$309,516.48
Saving, man hours	.....	119,112	166,488	280,249	168,762	559,350
Labor cost saved, by lowered down time	.....	$57,173.76	$79,914.24	$86,519.52	$81,005.76	$268,488.00

less than 50 percent of the pre 1929 force. This shortage of help prevented or delayed much work at the well which was necessary in order to keep the equipment in condition for best performance.

Table 17 has been prepared to show the saving of labor and labor costs for the mechanical downtime reduction shown by Table 16. These figures are based upon the assumption that repair hours under pre 1929 methods would have remained constant. Actually there should have been an increase because of the increased age of the equipment in service at the wells.

The saving in cost of labor, however, is only a small part of the actual saving. The increase in the useful life of equipment is of more importance. One engineer estimated that the saving to his company, from belting and sucker rods alone, amounted to $280,000 for the year 1931. Even assuming that proration was responsible for half of this decrease in mechanical down time, the saving would still amount to $140,000 for 1931.

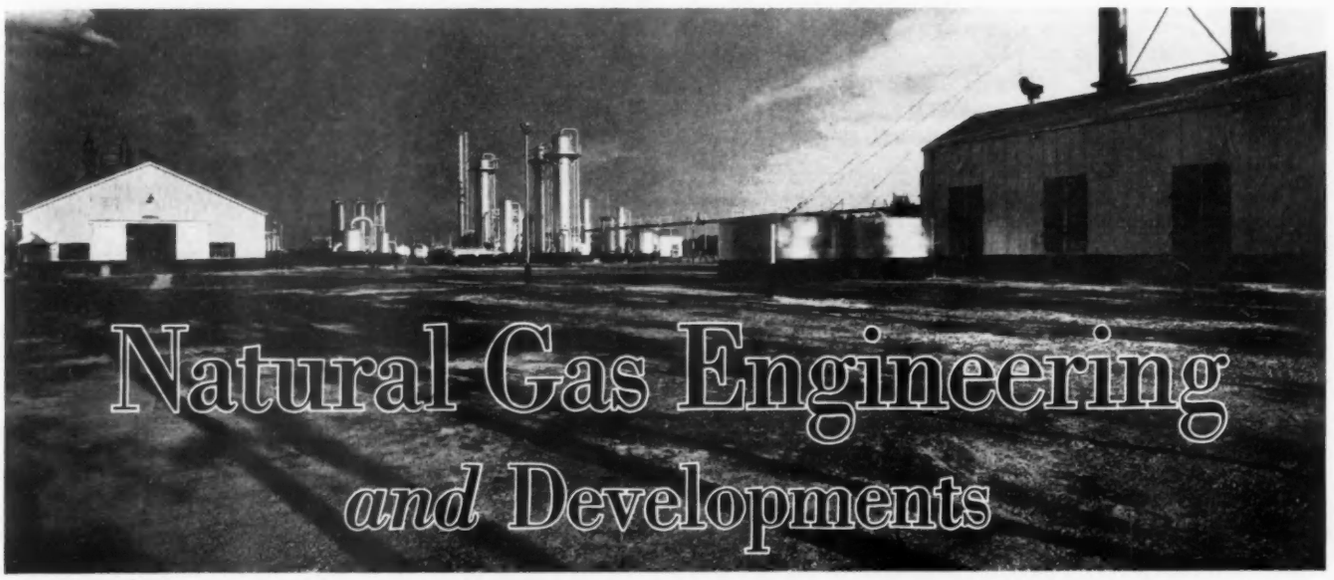
An intangible item of some consequence is the saving in oil produced. By 1931 mechanical down time had been cut to approximately one half that for the last quarter of 1929. After proration went into effect in this area, doubling mechanical down time would have made it impossible for many wells to make their allowable oil for the period. This is particularly true for wells where there was a rapid increase in the ratio of salt water to oil.

TABLE 16

SUMMARY OF ALL MECHANICAL DOWN TIME

Down Time in Hours

PERIOD—QUARTER	No. of Wells	Rods	Pumps	Belts	Engines	Clutches & Cam-shaft	Beam Hangers	Surface Equip-ment	Tubing	Total Repair Hours
4th, 1929	334	5820	9353	802	2333	1097	372	3742	1570	25087
Average per well, per quarter	...	17.44	28.04	2.40	6.98	3.28	1.12	11.21	4.70	75.20
1st, 1930	338	5683	7306	960	2407	1090	346	2484	7601	21876
Average per well, per quarter	...	16.79	21.60	2.84	7.12	3.22	1.02	7.35	4.73	64.80
2nd, 1930	338	4032	3696	941	1495	991	293	2952	1217	15617
Average per well, per quarter	...	11.91	10.90	2.78	4.42	2.93	0.87	8.74	3.60	46.15
3rd, 1930	334	1831	1889	710	2023	437	218	3473	960	11542
Average per well, per quarter	...	5.49	5.66	2.13	6.06	1.31	0.65	10.41	2.88	34.60
4th, 1930	334	905	3192	341	1889	322	118	3658	1186	11609
Average per well, per quarter	...	2.71	9.56	1.02	5.66	9.65	0.35	10.97	3.55	34.80
1st, 1931	326	1354	6456	602	2050	1118	130	1531	631	13872
Average per well, per quarter	...	6.15	19.80	1.85	6.27	3.43	0.40	4.69	1.93	42.52
2nd, 1931	326	1308	3470	648	2182	595	84	2119	1327	11734
Average per well, per quarter	...	4.01	10.63	1.99	6.68	1.82	0.26	6.49	4.06	35.94
3rd, 1931	326	766	3053	833	1716	538	163	1728	696	9492
Average per well, per quarter	...	2.35	9.36	2.55	5.26	1.65	0.50	5.29	2.13	29.09
4th, 1931	331	950	3751	552	1284	785	154	1822	672	9754
Average per well, per quarter	...	2.87	11.33	1.67	3.88	2.37	0.46	5.50	2.03	29.46
1st, 1932	322	727	1795	1078	1802	751	....	1750	926	8830
Average per well, per quarter	...	2.26	5.58	3.35	5.6	2.34	....	5.44	2.88	27.41
2nd, 1932	322	686	2177	1327	2467	972	....	2436	526	11023
Average per well, per quarter	...	2.13	6.76	4.13	7.67	3.02	....	7.58	1.63	34.22
3rd, 1932	324	730	1884	1550	2976	864	....	1375	545	9924
Average per well, per quarter	...	2.25	5.81	4.78	9.19	2.67	....	4.24	1.68	30.6
4th, 1932	324	718	2419	1262	2508	763	....	2364	453	10488
Average per well, per quarter	...	2.22	7.46	3.9	7.74	2.36	....	7.3	1.4	32.36
1st, 1933	334	840	2501	1169	3089	898	....	2162	1039	12604
Average per well, per quarter	...	2.52	7.5	3.5	9.25	2.69	....	6.48	3.11	37.7
2nd, 1933	336	910	2784	1603	2458	890	....	2652	914	12211
Average per well, per quarter	...	2.7	8.28	4.77	7.31	2.65	....	7.9	2.72	36.30
3rd, 1933	336	670	1795	1702	1774	1020	....	2210	816	9984
Average per well, per quarter	...	1.99	5.34	5.06	5.27	3.04	....	6.57	2.43	29.73
4th, 1933	331	432	1956	871	1922	490	....	2326	1298	9295
Average per well, per quarter	...	1.31	5.9	2.63	5.81	1.48	....	7.03	3.92	28.03



Removal of Small Quantities of Hydrogen Sulfide from Gas

JOHN C. ALBRIGHT

NATURAL gas in California, whether produced in conjunction with oil and recovered as casinghead gas and processed for the desirable hydrocarbons, or produced as a dry product, generally is free from hydrogen sulfide in quantities that will cause corrosion. In practically all fields, however, hydrogen sulfide is present in quantities running from 0.00 grains per 100 cubic feet at Santa Fe Springs, to as much as 270 grains per 100 cubic feet in the field at Venice.

Gas from the Venice field, sometimes referred to as Playa del Rey, was used as a domestic fuel soon after the field was discovered in 1930, being distributed to the various points of consumption by Southern Counties Gas Company. When the gas was first begun to be used, tests conducted indicated that the dry residue gas was free from hydrogen sulfide, but as time passed corrosion of pipe lines and equipment began to be noticed. Then a series of exhaustive tests were begun to determine the source of the corrosive agent.. The result of these tests is shown in Table I.

During this time and during a following period, tests were conducted on a series of wells in the south end of the Venice field, results of which are shown in Table II.

The California State Railroad Commission specifies that gas from wells must not contain more than a trace of hydrogen sulfide, as determined by the lead acetate strip method, when used for domestic consumption. The sensitivity of this test is approximately 0.30 grains of hydrogen sulfide per 100 cubic feet of gas.[1] Because of this regulation, and due to the corrosion of service equipment, it was necessary to remove the excess amount of hydrogen sulfide from the gas before it could be passed through the mains of Southern Counties Gas Company for distribution to the cities to be used as a domestic fuel.

Southern Counties Gas Company had little or no information concerning the design of a purifier for gas containing such a comparatively small amount of hydrogen sulfide. The majority of purifying units previously used with natural and manufactured gas were designed and constructed to process gas containing in excess of 100 grains of hydrogen sulfide per 100 cubic feet. In considering the design of an efficient purifier, the initial cost, the operating expense, the life of the equipment and the probable life of the Venice field were taken as a basis for calculations.

Iron oxide, which had been used in the purification of manufactured gas for a number of years, was finally decided upon as the most practical and economical of the several methods

TABLE I

Hydrogen Sulfide Content of Discharge Gas at Del Ray Oil & Gas Company's Absorption Plant, to Southern Counties Gas Company—Pressure 30-35 Pounds Gauge.

(White's Cadmium Acetate Test Used) Date	Time	Hydrogen Sulfide Grains/100 cu. ft.
12-12-1933	2:10 p.m.	7.5
12-13-1933	4:10 p.m.	2.5
12-22-1933	2:30 p.m.	2.5
12-22-1933	4:30 p.m.	3.0
12-23-1933	5:30 p.m.	0.6
12-26-1933	10:00 a.m.	0.6
12-26-1933	1:30 p.m.	1.2
12-27-1933	10:00 a.m.	6.0
12-27-1933	12:00 Noon	6.0
12-27-1933	1:20 p.m.	10.0
12-27-1933	2:30 p.m.	4.0
12-27-1933	2:45 p.m.	3.4
12-27-1933	4:30 p.m.	3.4
Average grains/100 cu. ft		3.9

[1] The Lead Acetate Test for Hydrogen Sulfide, Bureau of Standards Technological Paper No. 41.

considered. Iron oxide has demonstrated that the hydrogen sulfide content of a gas can be reduced easily to the desired concentration of 0.3 or less. Equipment was available that could easily be converted and used for the installation of such a purifier, and the iron oxide itself is reasonably inexpensive.

When iron oxide was first considered, an attempt was made to determine the amount of material that would be required to purify the volume of gas available for processing. Preliminary calculations, using Steere's formula made the process seem impracticable because it indicated that a bed of the oxide must be provided which would appear too large and unwieldy. The Steere formula is as follows:

$$A = \frac{G \times S}{3000 \times (D\,C)}$$

Where A = Cross section area in sq. ft. of oxide bed through which gas passes.
G = Maximum amount of gas in cu. ft. at 60° F. to be purified per hour.
S = A factor depending upon the hydrogen sulfide content.
D = Total depth of bed in feet.
C = A factor, depending upon the number of boxes used.

The conditions upon which the formula was based were different from those encountered in the Venice field, so a small experimental purifier, or pilot plant was designed to operate under the field conditions, so as to determine the quantity of iron oxide actually required to purify the hydrogen sulfide gas. It was constructed of pipe, using a piece of 12-inch casing, flanged at both ends, five feet in length and was filled to 44 inches with a bed of iron oxide. Connections were made so the flow of gas could be either upward or downward, but in the initial test runs, the gas was passed downward through the 44-inch bed.

By varying the gas flow through the purifier and taking lead acetate tests on the outlet gas, it was possible to roughly determine the capacity of the bed of oxide 44 inches in depth, by treating water saturated gas at 30 pounds pressure, with a hydrogen sulfide content of approximately four grains per 100 cubic feet. The results are shown below:

Gas flow, standard cu. ft, pr hr. per sq. ft. of oxide bed. Gas at 30 pounds gauge pressure. Depth of bed 44 inches.	Standard Lead Acetate Test
2,250	Positive
1,545	Positive
1,420	Positive
1,270	Trace
1,100	Faint Trace
900	Negative

From these results, it was concluded that 1100 standard cubic feet per hour was the maximum amount of gas, under these conditions, that could be satisfactorily purified for each square foot of oxide bed.

Shortly after the completion of the experimental work, an article, "Purifier Design, Anonymous, Gas Journal, Vol. 202, pp. 922-24, and Vol. 203, pp. 51-52, 1933, London," was obtained that was prepared on a purifier design which offered a formula for calculating the required amount of oxide for gas of any sulfide content. The formula is as follows:

$$R = \frac{4050\ \sqrt{S}}{F\ W}$$

Where:
R = Volume of oxide required/MCF of gas/hr.
S = Hydrogen sulfide content, grains/100 cu. ft.

TABLE II

Well Sampled	Date Tested	Pressure or Vacuum	Producing MCF per day	Hydrogen Sulfide Grains/100 cu. ft.
A	12-12-1933	Vacuum	50	7.5
B	12-24-1933	Vacuum	650.0	1.3
C	12-23-1933	Vacuum	780.0	3.5
D	12-23-1933	Vacuum	15.0	0.0
E	12-26-1933	Vacuum	100.0	5.0
F	12-22-1933	245 Pounds	780.0	15.0
G	12-24-1933	Vacuum	105.0	0.9
H	12-26-1933	245 Pounds	780.0	15.0
I	12-23-1933	Vacuum	80.0	100.0
J	12-24-1933	6 Pounds	400.0	54.0
K	12-23-1933	Vacuum	40.0	3.4
L	1- 9-1934	Vacuum	50.0	0.0
M	1- 9-1934	Vacuum	200.0	13.0
N	1- 9-1934	Vacuum	35.0	3.2
O	1- 9-1934	Vacuum	35.0	0.0
P	1- 9-1934	Vacuum	17.0	54.0
Q	1- 9-1934	Vacuum	22.0	270.0
R	1- 9-1934	Vacuum	30.0	10.8
S	1- 9-1934	Vacuum	140.0	54.0

F = Active iron content of oxide, percent.
W = Bulk density of material lbs./cu. ft.

Substituting in the above, the value for the conditions existing in the Venice field gave:

$$R = \frac{4050\ \sqrt{3 \times 3.9}}{30 \times 25} = 18.48 \text{ cu. ft of oxide required per MCF of gas treated per hour.}$$

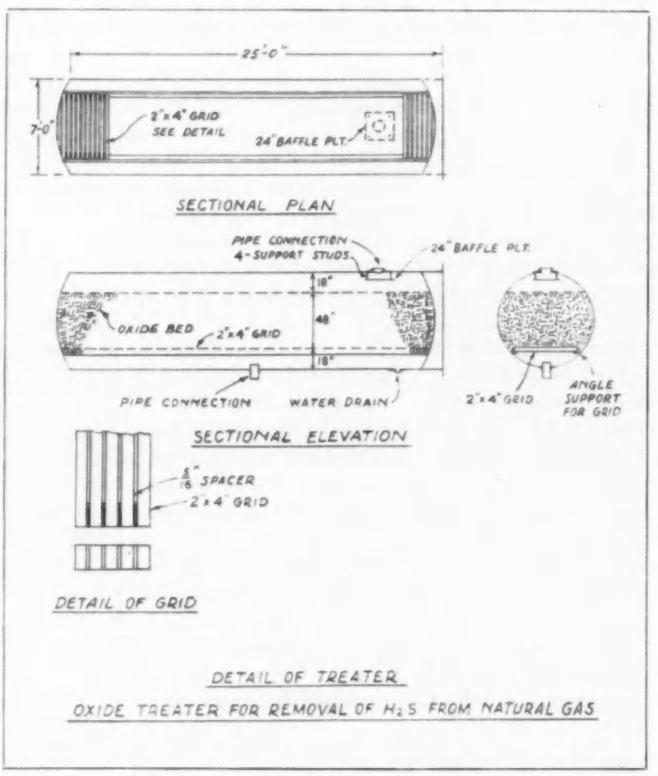
Since the volume of gas treated per hour is

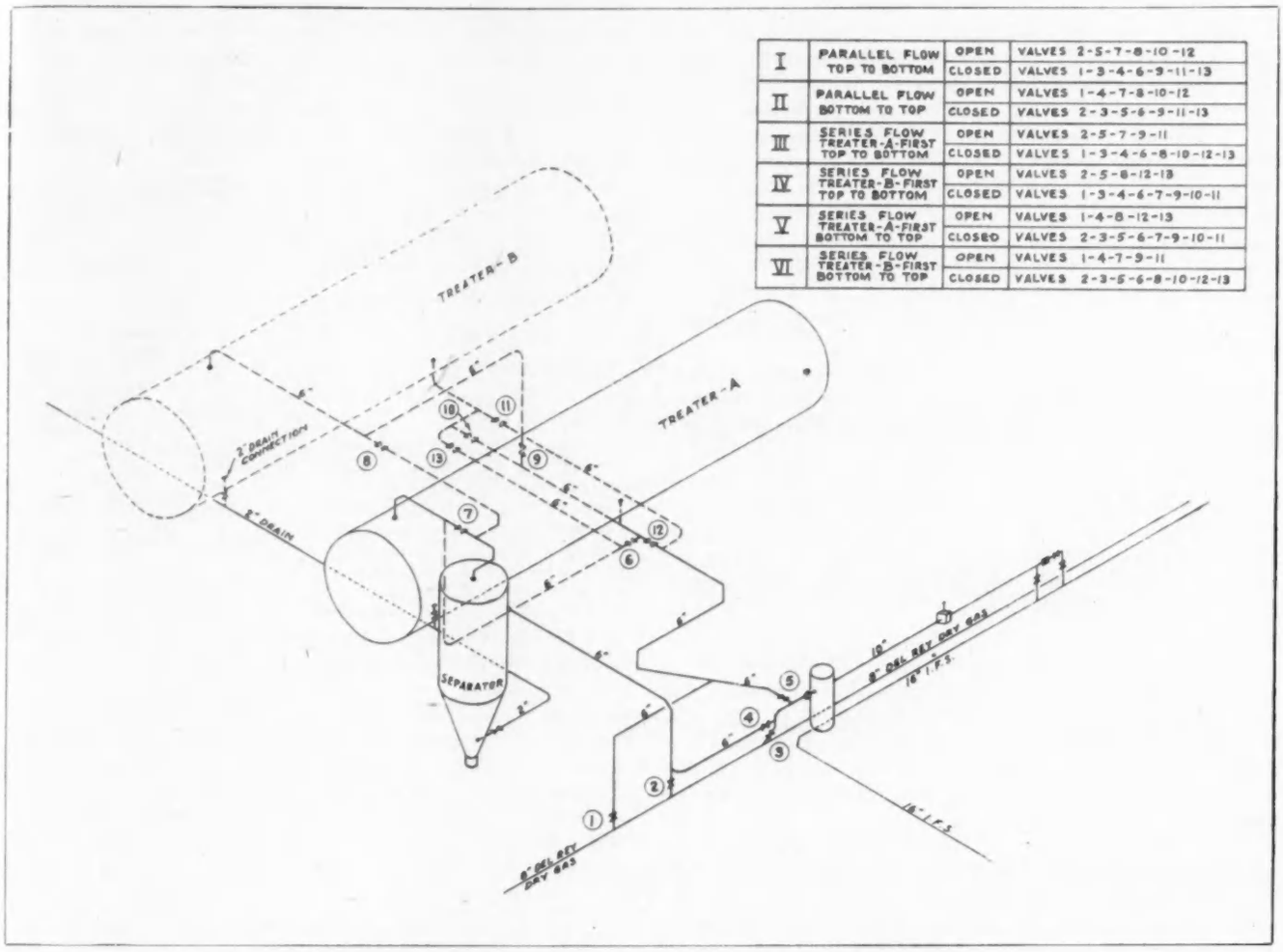
$$\frac{1{,}000{,}000}{1{,}000 \times 24} = 41.6 \text{ M.C.F.}$$

The total amount of oxide required is,

$$18.48 \times 41.6 = 768 \text{ cubic feet.}$$

After a number of tests had been made with the pilot plant,

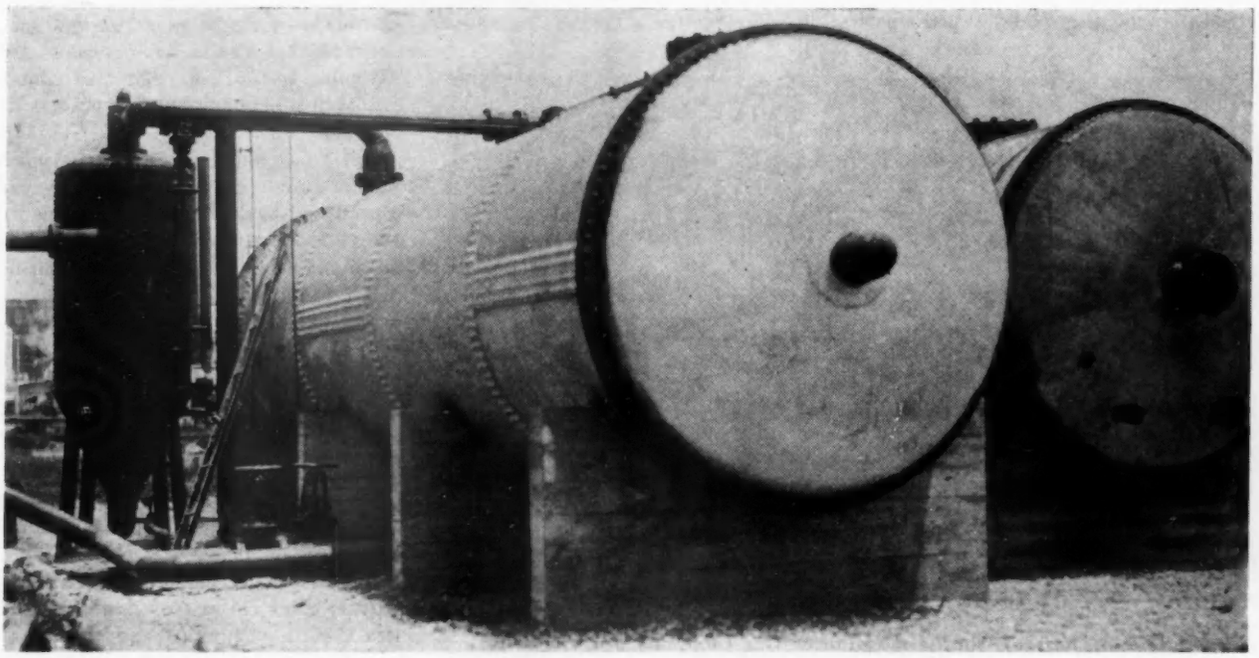




I	PARALLEL FLOW TOP TO BOTTOM	OPEN	VALVES 2-5-7-8-10-12
		CLOSED	VALVES 1-3-4-6-9-11-13
II	PARALLEL FLOW BOTTOM TO TOP	OPEN	VALVES 1-4-7-8-10-12
		CLOSED	VALVES 2-3-5-6-9-11-13
III	SERIES FLOW TREATER-A-FIRST TOP TO BOTTOM	OPEN	VALVES 2-5-7-9-11
		CLOSED	VALVES 1-3-4-6-8-10-12-13
IV	SERIES FLOW TREATER-B-FIRST TOP TO BOTTOM	OPEN	VALVES 2-5-8-12-13
		CLOSED	VALVES 1-3-4-6-7-9-10-11
V	SERIES FLOW TREATER-A-FIRST BOTTOM TO TOP	OPEN	VALVES 1-4-8-12-13
		CLOSED	VALVES 2-3-5-6-7-9-10-11
VI	SERIES FLOW TREATER-B-FIRST BOTTOM TO TOP	OPEN	VALVES 1-4-7-9-11
		CLOSED	VALVES 2-3-5-6-8-10-12-13

Above: Hydrogen sulfide gas treater on Del Rey lease of Union Oil Company.

Below: "Absorbers," showing water dip, Southern Counties Gas Co.



the top flange was removed for inspection of the oxide bed. It was found that the mass had shrunk vertically about eight inches and a channel had formed all the way around the outer edge of the bed. Gas had been by-passed through this channel without becoming intimately in contact with the oxide.

With the aid of the information obtained from the experimental pilot plant operation, the commercial unit was designed and constructed. The first unit of the plant was assembled in January, using an absorber, seven feet in diameter, as a container for the oxide bed. This column was placed in a horizontal position on concrete cradles with sufficient connections and gates so the gas could either be passed through the column from the bottom, traveling upward through the bed, or the flow reversed so it would flow downward.

A supporting grid was placed in the shell by welding an angle iron on each side of the shell and full length at about 18 inches from the lowest part as a support. Two by fours were used for the grid, spaced 5/16-inch from each other, maintained at that point with strips of wood secured at the end of the two by fours. The entire length was filled with these grids, after which a uniform bed of iron oxide was placed upon them, totaling approximately 730 cubic feet. This amount was decided upon from results of the experiments which gave a figure of 800 cubic feet of gas per hour per square foot of oxide in the purifier.

After this unit had been in service for a few months, it was found that during peak loads, caused by more gas being passed through the absorption plant of Del Rey Oil & Gas Company, an insufficient purification was being obtained, and another unit identical to the first was built beside it. It also was filled with enough oxide to bring the total of the two beds to 1465 cubic feet. The inlet connection, at the top of the purifiers, was arranged with a 24-inch square baffle plate under the flanged inlet to properly distribute the gas in the shell. The outlet connection was placed in the shell near the center and extending through the plate a sufficient length to prevent water from flowing out. A water drain was placed near the bolted head to remove condensation.

Entrance to the shell of either, or both units is accomplished by removing the bolted seven-foot flanged dished head from the end of the one to be entered. The inside diameter is such that a man may work easily standing upright, and the grids being easily removable, facilitates either filling or dumping the oxide.

Rectification of the oxide is accomplished in place by the introduction of approximately two percent air into the unpurified inlet gas, which is saturated with water vapor when it leaves the gasoline recovery plant so that no humidity control or treatment is required. To prevent excessive corrosion, the inside of the shells of the horizontal absorbers were coated with a heavy asphalt after the grid supports had been welded in place and all connections made.

Daily lead acetate strip tests are made each day to determine the condition of the purified gas, as well as separate analyses for air and carbon dioxide. Tests were made on the individual units on May 28, the results of which are shown below:

Origin of Sample	Grains H_2S per 100 cu. ft. of Gas (Cadmium Acetate Method)	Railroad Commission Qualitative Test (Lead acetate strip method) Official one minute exposure	Extended three minute test
Untreated lean gas to old oxide bed (first unit)	5.0		
Partly treated lean gas after leaving old bed and before entering the new bed (second unit)	0.3	Positive	Very Positive
Treated lean gas after leaving new bed (second unit)	..	Negative	Negative

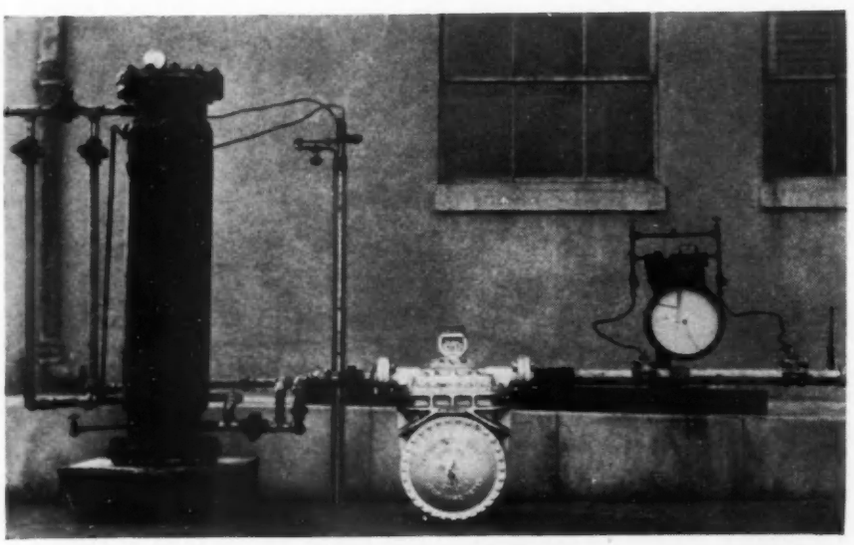
As the purification plant was constructed largely from surplus materials and obsolete gasoline equipment at the plants in the field, the cost was not large, amounting approximately to $3,600.00. If new materials were required, it is estimated that the cost of a complete unit would be approximately $6,000.00. It has been assumed by the engineers and chemists of Southern Counties Gas Company, and engineers of the oil companies interested in marketing their residue gas that the charge of 1465 cubic feet of iron oxide will properly purify the gas for a period of one year. An annual operating cost has been set up, based on these calculations, which are tabulated as follows:

Interest at 7 percent	$252.00
Depreciation, 10 year 6% sinking fund.....	273.00
Taxes	72.00
One charge of Oxide, 1,465 cu. ft.	513.00
Labor, 6 men days	60.00
Total	$1,170.00

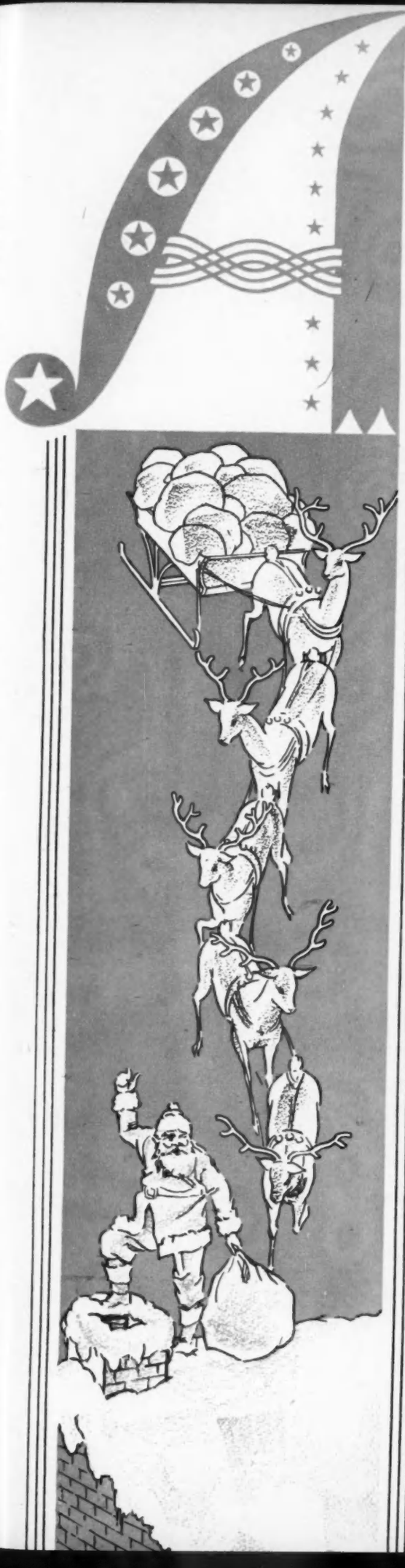
Assuming that a daily average of 3,000,000 cubic feet are passed through the unit for treatment, the cost per M cubic feet is 1.07 mils. Since the unit was built, an extension of the Venice field has been made by discovery of oil and gas in Fourl No. 1, which is making about 3,000,000 cubic feet of gas that also contains hydrogen sulfide and is being processed in the plant of Del Rey Oil & Gas Company. This volume added to the normal amount processed will undoubtedly make it necessary to double the size of the present purification plant, but by processing the additional amount, the cost of purification per MCF will not be increased.

It appears feasible for other operators to construct plants of like character to process gas containing hydrogen sulfide, not alone for domestic consumption, but in order that the fuel may be utilized in isolated gas engine driven power plants to prevent corrosion exhaust lines and deterioration of spark plugs, piston rings and other equipment.

The writer is indebted to Arthur B. Allyne, chief chemist of Southern Counties Gas Company for assistance in the preparation of this article.



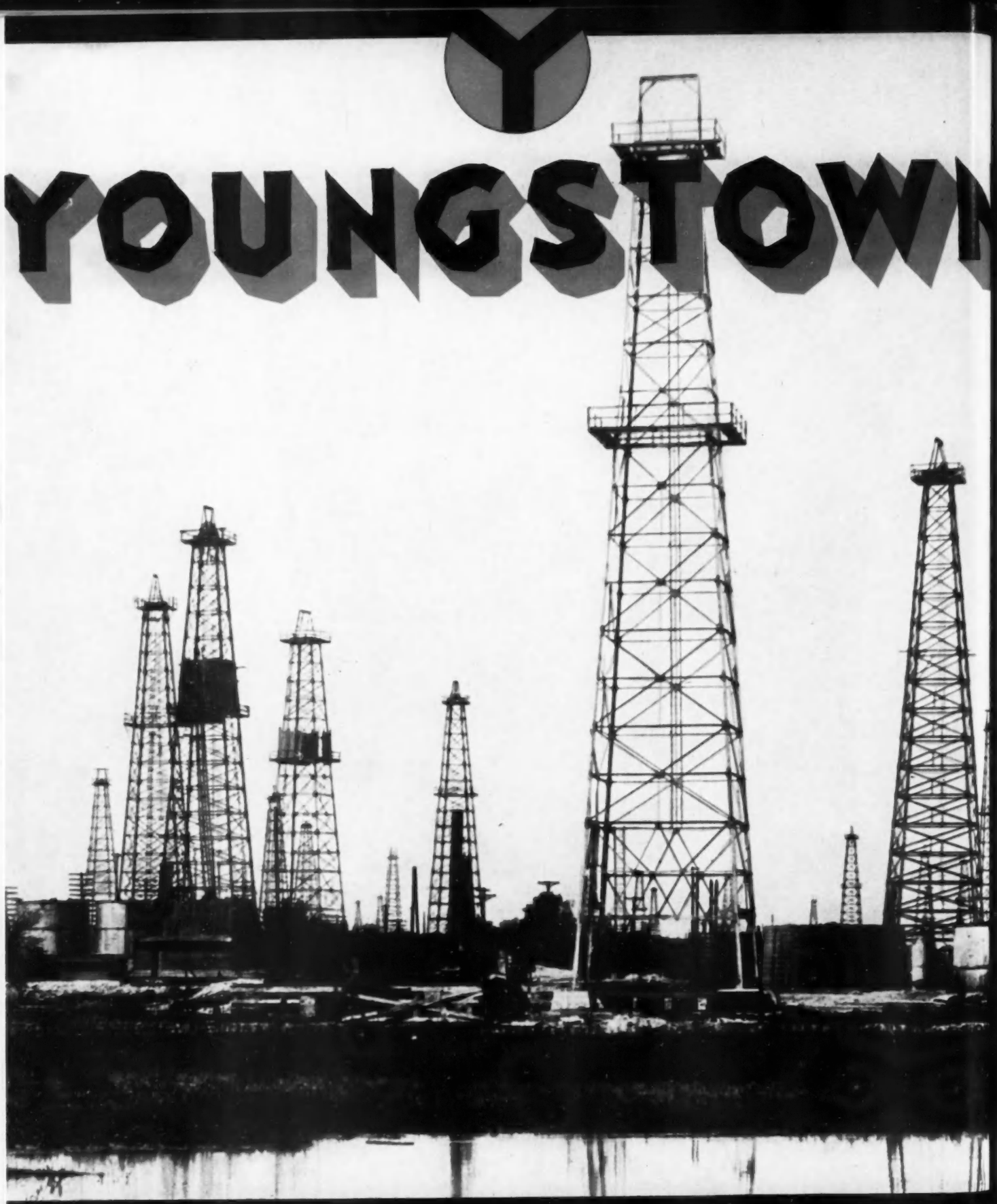
Experiment of unit of Southern Counties Gas Company for removing H2S from gas.



GAIN WE TAKE
PLEASURE IN
WISHING YOU A
MERRY CHRISTMAS
AND A HAPPY
NEW YEAR.

The Continental Supply Co.

DALLAS TEXAS



OIL COUNTRY TUBULAR GOODS

Whatever the drilling conditions may be, Youngstown oil country tubular goods always live up to their reputation for unsurpassed performance. No other drill pipe, casing or tubing can give greater protection to drilling investments.

THE YOUNGSTOWN SHEET AND TUBE COMPANY

Manufacturers of Carbon and Alloy Steels

General Offices - - - YOUNGSTOWN, OHIO

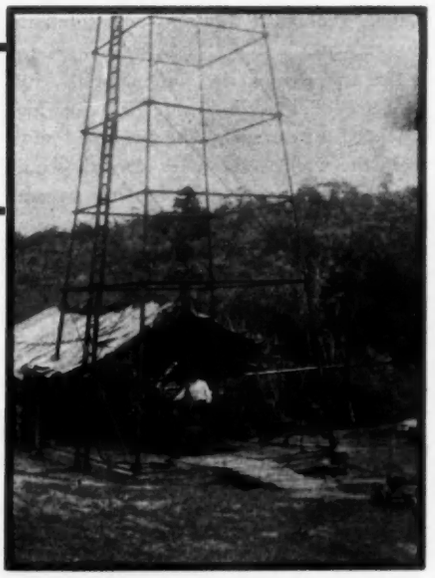
Youngstown's Pipe is distributed by --

THE CONTINENTAL SUPPLY COMPANY - - - Dallas Texas

FOREIGN DEVELOPMENTS AND TECHNOLOGY

Geological and Drilling History of Knight's Dome, South Australia

A. E. KNIGHT
Geologist, Mt. Gambier, S. A.



KNIGHT'S Dome, situated a few miles west of the town of Mt. Gambier, South Australia, occurs as a rather complex structure in tertiary strata. It is about 18 miles from the present coast line.

Surface rocks within certain structural limits are basal Miocene and Oligocene of the Polyzoal limestone series, being characterized by an alternating dolomitic phase in which the stratification is clearly defined and rather closely laid.

Owing to intense erosion, the topography is of low relief rising in no part more than 100 feet above the surrounding country. Nevertheless, a fine section of the beds is exposed over a comparatively short distance in which is seen, on the northeastern flank radiating dips up to 33 feet. The site of Knight's Dome well is fixed on the apex of this section.

Over the more inland reaches the polyzoal limestones predominate, they are comparatively thin and have retained their horizontal disposition with regular monotony. For the most part they make direct contact with the older granite and Pre-Cambrian floor—marking a big unconformity, and for these reasons are regarded as having no potential value. Regionally they extend to the north for several hundred miles. To the east they terminate in the Gipsland basin, where some oil has been found at their base. To the west they are lost in the far reaches of Western Australia, and to the south they continue under the South Pacific.

In the extreme southerly coastal regions, however, which occupy the lower southeast of South Australia, and the lower southwestern portion of Victoria, there is a pronounced thickening of these deposits bringing in a rather extensive delta of the Oligocene and probable Eocene. The rapidity with which these beds increase their thickness together with subsequent deformation of these beds, indicates the possibilities of these lower regions.

Seepages

For 50 years or more, slabs of bitumen have been found on the shores, frequently in an extremely plastic condition. They range up to nine feet in length, some four feet in width, and from four to six inches in thickness. The writer has seen and examined such slabs. Much speculation, however, has radiated around its probable source, some academic minds having traveled far afield, while one eminent English geologist suggested that it was brought to, and buried on, our shores by the ancient mariners, "in barrels" who used this pitch to calk their whaling boats. But, conceding the faculty of common sense to these mariners, one must assume they would bury it high above the flood line.

However, of these manifestations there is no doubt, but whether their source is close to, or far removed from our coast is not yet definitely proved. The facts are, that such slabs appearing very fresh and sometimes plastic are periodically found and do not seem to have traveled great distances. It is therefore more probable that the structural area on whose coast these messengers arrive will some day solve the problem.

One seepage on the Glenelg River, a few miles inland, has created some interest and raised the usual conflicting opinions. It occurs near Haine's Landing on the northwestern side of the river where the oil rises to the surface of the water when the mud is agitated near the cliff face. The oil is brown in color but does not contain hydrocarbon fractions above light lubricant, which is more or less characteristic of the Gipsland oil. Now, this mud is continuous on the river bed but as no such seepage or showing can be found elsewhere it seems conclusive that it is not indigenous to the main body, or an ingredient of any particular portion. It must therefore be one of two things: a natural seepage, or placed there many years ago by human agency.

Exploration

Some drilling has been done in this and the adjoining region. In all, about 10 bores have been drilled at widely separated intervals, but as nearly all the rigs were poorly equipped, and inadequately financed, results have been compatible with the circumstances, the best effort being 2254 feet in Oligocene strata.

The last bore put down at Knight's Dome was abandoned at the reported depth of 2013 feet. Here a potential structure had been delimited and a combination rig installed calculated to reach bedrock.

The following brief description, however, may help clarify many wrong ideas of the oil quest in Australia, and assist oil men abroad to grasp the facts as they really are.

Surface rocks to a depth of 65 feet are Polyzoal limestones, "Upper Oligocene" where the lignitiferous beds were met and continue for several hundred feet deeper. From there on to present bottom, 2013 feet, the strata are alternating clays, mudstones and siliceous sands, the latter predominating. The surface water table was met at 55 feet, and it seems that many succeeding sands are also saturated and connected with this head. No salt water was encountered to the depth mentioned.

After spudding in, the hole was continued with the percussion drill. The first string of casing was set at about 400 feet. Owing to further caving the second string of 10-inch casing had to be set around 600 feet (more than 2000 feet of this casing was on hand). At this depth the rotary was put into commission and steady progress was made to nearly 1700 feet, where the drill pipe became frozen and a fishing job of six months duration ensued. A quantity of drill pipe was left in the bottom of the hole. At the top of this the whipstock was set and the hole was sidetracked. Eight-inch casing is said to be set at 1600 feet, and from there to bottom is open hole. While drilling the final 400 feet the drill pipe was again lost and fished out, and the hole ultimately reached the reported depth of 2013 feet under full head of mud.

Test

After the well had been drilled to bottom a test was made by Dr. W. G. Wool-

nough, geological adviser to the federal government.

The test was carried out under the full pressure of mud fluid in the bore, and consisted of scraping the pre-fixed mud from the wall of the hole. Any showings of oil under these conditions must be considered important, especially as the duration of the test was only a matter of minutes. Dr. Woolnough comments very strongly on the attitude of Oil Search, Ltd., for abandoning the bore at such a ridiculous shallow depth, and subscribers were much disappointed at this action. However the following extracts from his report make the position clear:

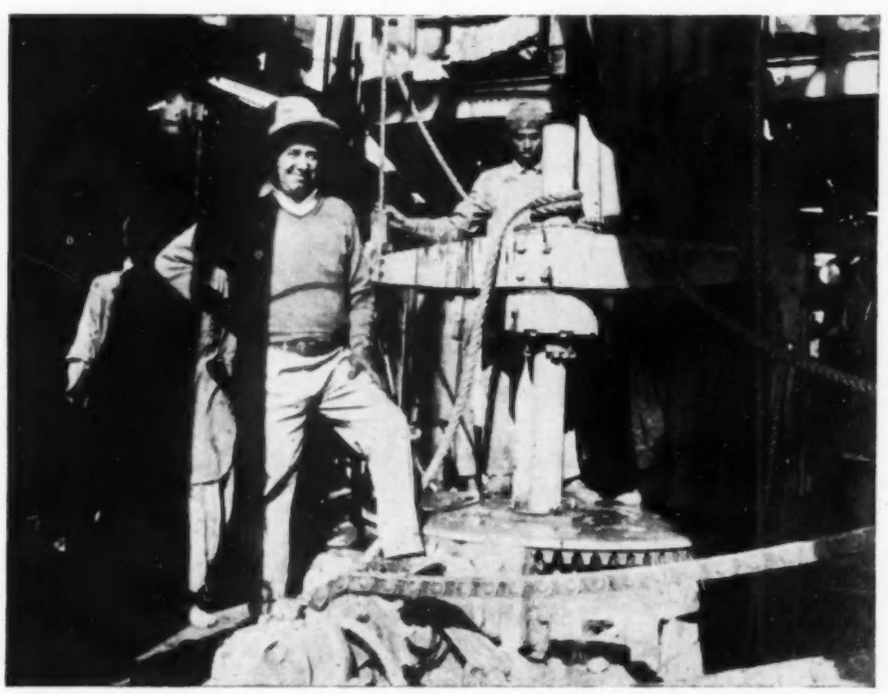
Comments by Woolnough

"After circulation was started again at the 1825-1869-foot sand, the mud was practically clear of oil for some time. Later as it became appreciably thinner in consistency and began to decrease in volume, very heavy oil showings became apparent, together with a very small amount of gas, and samples were collected. At the time of collection I am of opinion that the oil had a slightly petroliferous odor, which it lost later. It is likely that the amount of oil was not greater than might have been produced by lubrication of the table and other parts of the drilling equipment. My own experience of actual drilling is too limited to permit me to draw extensive comparisons, but I do not remember ever having seen such voluminous showings on the circulating mud during actual drilling. The conditions and the amount of oil during the test of the upper sand were strikingly different from those while the lower sand was under examination: Further, as shown above, unless oil or gas under high pressure happened to be present in the sand, the active absorption of the fluid by the formation would militate very strongly against the appearance of any oil contained in them, if indeed such showings were not entirely inhibited, etc."

Correction

Jorge Munoz Reyes, Direccion General de Minas y Petroleo of Bolivia, called THE OIL WEEKLY's attention to an error in the central column of page 35 of the October 8 OIL WEEKLY and wishes to make the following correction: The part of the article on Bolivian prospects referred to says: "Speaking of the geological conditions and stratigraphy of the Lake Titicaca zone, he says that in the first zone, the surface of the region is covered entirely by sedimentaries . . ."

In the manuscript from Dr. Reyes the territory of Bolivia was divided into three oil zones, namely: (1) Sub andean zone which extends from the Argentine to the Peruvian frontier, (2) The central zone, which includes most of the Department of Cochabamba, and (3) The Lake Titicaca zone. The article, as presented, assigned the stratigraphy of the first zone to the Lake Titicaca zone, which is really the third zone.



H. L. Ward, drilling superintendent for Attock Oil Company, Khaur field, Punjab, and co-author of "Drilling Against High Rock Pressures"—in that field, which appeared in a recent issue of The Oil Weekly. Picture shows the snubbing equipment in use in Khaur field.

Brazilian Wildcat Test Sets Record for Depth

The government of Brazil has established a new depth record for Brazil in the well it is drilling in the Sao Pedro area of the state of Sao Paulo, having attained a depth of 1130 meters (3706.4 feet), according to a letter received by THE OIL WEEKLY December 12.

Location of the well was entirely speculative, but the Sao Pedro area of Sao Paulo has witnessed unsuccessful drilling for oil for more than 20 years. Most of the wells have been instigated by the hope that the few bituminous impregnations of rocks in the vicinity may be related to important oil accumulations underground.

The government's well was started in the Triassic Sao Bento sandstones, and at the same time the communication was actually cutting the lower Permian and glacial Itarare formation.

With the exception of the well known bituminous shales of the Iraty formation at a depth of about 240 to 270 meters, no traces of oil were encountered in the wildcat.

Recent geological studies, complementary to the drilling, have actually proven the area unfavorable for petroleum occurrence in commercial quantities, that is, from stratigraphical and structural points of view. Nevertheless, a well as deep as the one actually drilled (and drilling) is of considerable geological interest, particularly for a region where the subsurface geology and tectonics have been so little studied.

Standard-percussion tools are being used on the well.

Pipe From Germany In Exchange for Oil

Shipment will begin about January 1 on 3750 tons of six-inch steel pipe from Germany to Sun Oil Company for construction of a 100-mile gasoline pipe line from Marcus Hook, Pennsylvania, to tidewater on the New Jersey coast as result of a barter arrangement between the oil company and Germany which calls for payment of the pipe with lubricating oils produced in the United States.

Through its lubricating oil trade in Germany, Sun Oil Company had accumulated a considerable credit which could not be liquidated because of German restrictions on foreign exchange.

Comment has been made that the barter system opens way to an industrial development not only in laying the pipe line, but in producing and installing pumping machinery, tank farms, and other equipment of the pipe line branch of the industry.

Will Determine Importance Of Czechoslovakia Strike

Due to the fact that Czechoslovakia is dependent upon imported crude oil to supply the needs of the country, considerable interest is manifested there in the recent discovery of oil near Jasina in the Sub-Carpathian region at the extreme eastern corner of the country.

Only one producing well has been completed, but addtiional tests are being planned to determine whether the Jasina deposits will produce oil in paying quantities.

Four hundred miles from Jasina, near the town of Hodonin on the Moravian-Slovak frontier, is located the only other producing area of Chechoslovakia. The total oil produced in this area in 1933 amounted to only 122,760 barrels.

Natural Gas Pipe Line System for Peru

Pacific Gas Company of Lima, Peru, expects to inaugurate a natural gas service to the public about January 1, 1935. This service will be restricted to Peru, but according to an official announcement from Lima, the company ultimately expects to extend its radius of operations to the neighboring republics of Chile and Ecuador.

Estonia May Expand Shale Oil Industry

Harry E. Carlson of Tallinn, Estonia, has advised the Department of Commerce at Washington that plans for the extension of the industry's crude oil and gasoline producing plants were discussed at a recent meeting of the board of control of Estonia's shale oil industry.

Oil Found Near Hudson Bay Junction, Canada

Low grade crude oil has been discovered in the Trail Blazer well close to Hudson Bay Junction in Canada. The well, though close to the Manitoba border, is located in the Province of Saskatchewan.

El Salvador Grants Minimum Oil Duties

An executive decree effective September 1, retroactive, grants minimum rates of duty on imports into El Salvador from any source, of certain petroleum products, under the new preferential tariff system, according to an item appearing in International Petroleum Trade, Vol. III, No. 12.

These rates are granted in accordance with Article 3 of the new preferential tariff law, which authorizes the executive to apply the minimum duties to any article, the importation of which is deemed of absolute necessity.

Minimum rates of duty on these petroleum products, in United States currency per 100 gross kilos, are as follows:

Crude oil, 0.10; Diesel oil, 0.25; gasoline in containers, 4.50; gasoline in bulk, 5.50; and kerosene, 3.50; (see Commerce Reports of July 28, 1934 for announcement of the decree establishing the new Salvadoran preferential tariff system). (Vice Consul W. Quincy Stanton, San Salvador.)

Nicaraguan Wildcat Abandoned in Eocene

Compania Petrolera de Nicaragua S. A. has abandoned its wildcat on the western, and gentler, flank of a long, narrow anticlinal fold parallelling the Pacific coast of Nicaragua.

A communication recently received by THE OIL WEEKLY from the operators states that the well was drilled with a cable tool outfit and reached a depth of 3940 feet before being abandoned. No signs of either oil or gas were encountered. The well penetrated a thick section of very calcareous, rather fractured, marine shales, interbedded with occasional very prolific water sands. Water was a continuous source of trouble, for it caused caving, and the well had to be drilled with the hole full of water most of the time.

The formation penetrated is thought to be Upper Eocene in age, this determination being based on micro-fossils found in what is thought to be the same formation several miles to the south. Correlation of beds is difficult in this district, however, for the physical characteristics of the formation are very uniform for considerable thicknesses, and fossils of any kind are scarce. Only one foram was found during drilling operations, despite the fact that samples were examined every 10 feet.

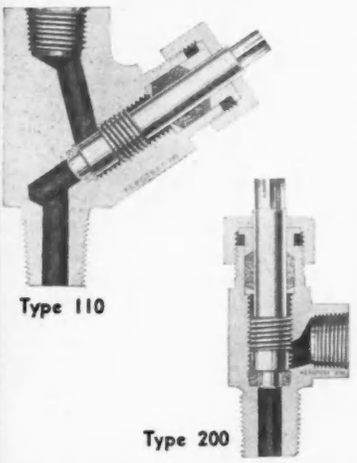
Curacao Refinery To Be Enlarged

Russell M. Brooks of Curacao, Netherland, West Indies, has released a statement to the effect that Curacaosche Petroleum Industrie Maatschappij (Shell Oil Company) will spend 12,000,000 florins (gold) during 1935 and 1936 enlarging the refinery at Curacao. Among other works, the plan includes the addition of 50 or 60 storage tanks.

Production of Colon Oil Corporation's producing subsidiary at Venezuela, South America, for the four weeks ending November 23, was 372,300 barrels, according to an announcement received December 17, from the above corporation.

KEROTEST
REGISTERED U. S. PAT. OFF.

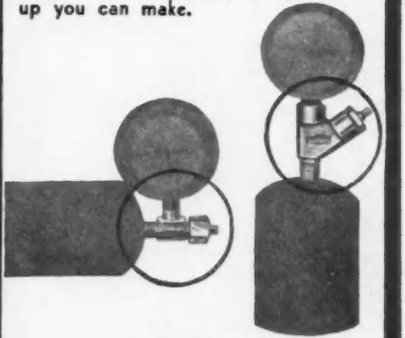
YOUR XMAS TREE NEEDS KEROTEST GAUGE SHUT OFF VALVES



Type 110

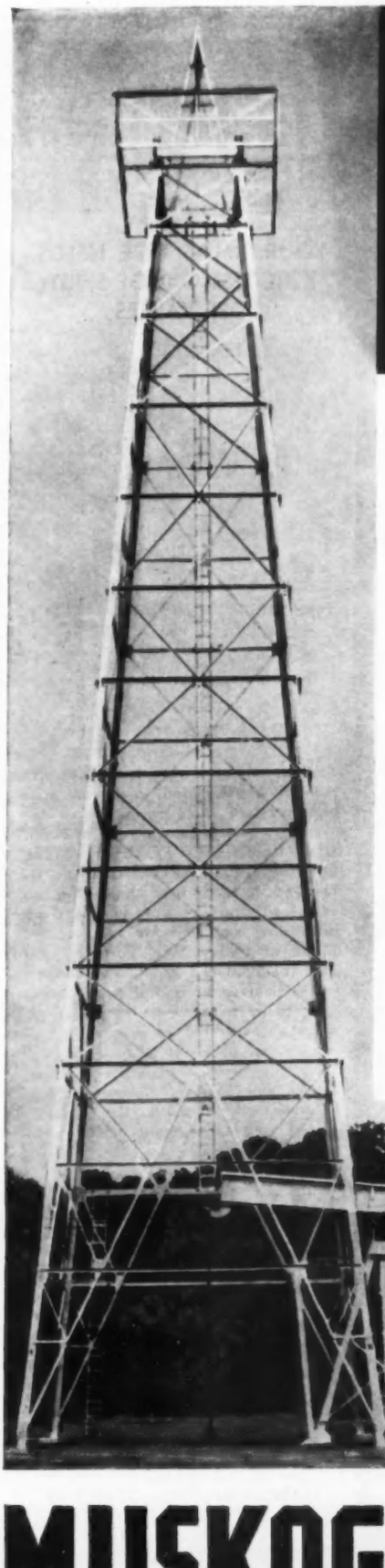
Type 200

You are always trying to reduce the number of threaded joints on your high pressure lines!
Here is a way to save several of them. Use KEROTEST FORGED STEEL GAUGE SHUT-OFF VALVES.
Inserted in a tapped bull plug on your well string or flow lines and no fittings of any kind are required.
Made of Heavy Steel Forgings suitable for 3000 lbs. W. P., and tapped for vertical or horizontal connections. (See illustrations).
Mighty convenient to use for sampling valves, blow-offs and drips.
They cost but little money—far less than a high pressure globe valve and fittings—and yet assure the most effective and satisfactory gauge hook-up you can make.



KEROTEST
MANUFACTURING COMPANY
Pittsburgh, Pa.

KEROTEST
REGISTERED U. S. PAT. OFF.



M.I.W. Steel Derricks and Rig Fronts

Quick Popularity Based on Improved Construction

Our engineering department, with a background of 11 years experience in building derricks, have incorporated into M.I.W. Derricks a number of notable improvements which have been proven and approved by many leading operators.

The acceptance of our derricks by exacting buyers has exceeded all expectations. Sales are more than we anticipated. We appreciate this recognition and hope for the privilege of wider service to the industry in the future.

▲

A complete line of A.P.I. Derricks and Steel Rig Fronts is carried in stock ready for immediate shipment.

▼

MUSKOGEE IRON WORKS

STEEL DESIGNERS — FABRICATORS — ERECTORS

Main Office and Plant:
Muskogee, Oklahoma

1115 First Nat'l Bank Bldg.,
Dallas, Texas

MARKETS and STATISTICS

Inventory Time Promotes Lower Demand and Prices

THE general desire of buyers to carry light stocks at the end of the year, at inventory time, has been an influence strong enough lately to outweigh various market-strengthening factors, and prices of refined oils have consequently continued to be inclined toward weakness.

Another circumstance which has apparently contributed somewhat toward relative weakness of the markets has been general anxiety as to whether or not present rigid control of crude oil production, even in East Texas, will prove lasting.

There is considerable misgiving in anticipation of the decision by the Supreme Court in the Panama and Amazon oil code cases, expected shortly after opening of the new year. A decision adverse to the federal oil control authorities might seriously upset the current stabilized situation, it is believed. Regulating interstate oil shipping through tender requirements, as state authorities control intra-state shipping, the federal authorities have had a highly important part in the virtual elimination of hot oil producing and refining in East Texas.

The intra-state phase of shipping control in that hitherto troublesome area has also offered cause for some concern. Last week the Texas attorney general's department took the initiative in court action affecting the railroad commission's new tender requirements. Injunctions were obtained, to prevent numerous East Texas companies and operators from violating the commission's orders. But almost at the same time one refining company in another state court succeeded in obtaining a temporary restraining order, preventing the state authorities from enforcing the tender requirements against it.

Mid-Continent Gasoline Prices

The markets for gasoline at Mid-Continent refineries have continued sluggish, with demand slack, and prices tending to sag. The ruling spot price on tank car lots of third grade, below 62 octane, U. S Motor fuel appeared last week to be around 3½ cents a gallon, down an eighth-cent from the previous week, and off a quarter-cent from two weeks previously. That price applied in North Texas, Group Three, Oklahoma, region, as well as in East Texas. The so-called standard grade U. S. Motor fuel, 62-67 octane, meanwhile, was averaging 3⅞ cents a gallon in East Texas, 4 cents for North Texas, and 4⅛ cents for Group Three. Premium grade, 68-70 octane, was bringing 4⅜ cents a gallon at East Texas refineries, and 4⅝ cents in North Texas and Group Three territory.

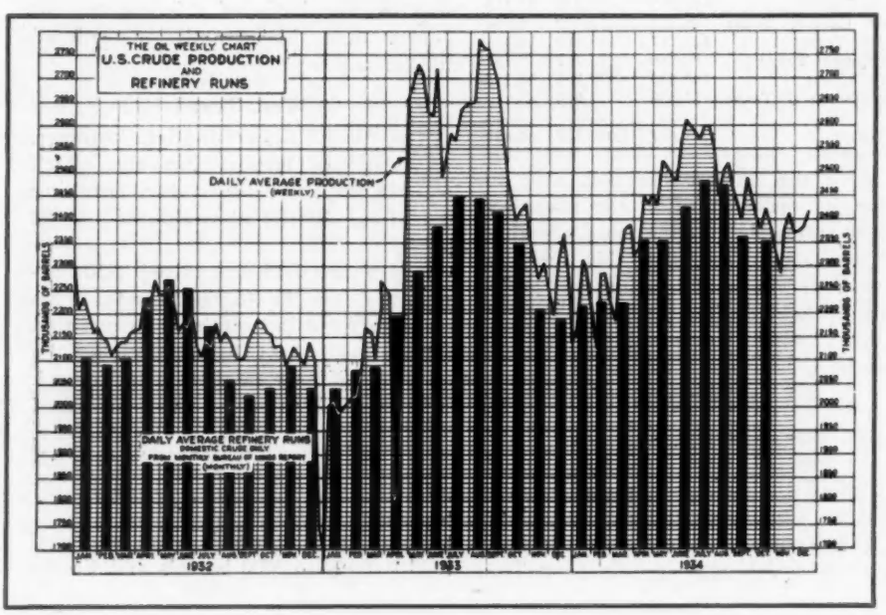
Those prices were the lowest since late October, but were around the averages for 1934. They were, moreover, despite the recent weakening, only about a half-cent below the peaks of the year, established in late May and at the middle of November.

The May high prices were due to code-sponsored surplus gasoline buying in East Texas by major companies. The November spurt was due to plans for similar buying, although such plans failed to materialize, and to improve control of hot oil in East Texas.

Just as those strong markets accompanied actual or promised effective control of production of crude and gasoline, the year's lowest prices attended actual or threatened lack of such control. The lowest refinery prices of 1934 prevailed in September and October, when hot oil was being produced and refined in unusually large proportions in East Texas. They were also low, under similar circumstances, in the latter half of February and during March.

To show the year's price range, spot quotations on third grade gasoline at East Texas refineries may be cited. In late May the price went as high as 4⅛ cents, and at the middle of November to 4 cents. In the February-March sub-normal period the price ranged between 3¼ and 3 cents a gallon, and in the September-October depression from 3¼ cents down to 2 cents on tank car shipments and to 1½ cents in some instances on material going out by trucks. Outside of those periods of sub-normal and above-normal prices, the spot sales generally ranged between 3½ and 3¾ cents a gallon.

Although the markets at the Mid-Continent refineries have been showing weakness in the past two weeks, the retail gasoline market east of the Rockies is in an improved condition, following the lifting of prices to normal levels in Pennsylvania and New Jersey shortly before the middle of December. The whole gasoline market, at refineries and service stations, has been in comparatively good condition for several months on the Pacific Coast.



Texas State Allowable Raised 60,480 Barrels

Austin, Texas.—The Texas Railroad Commission last week promulgated a new proration order effective December 18, increasing the state allowable 60,480 barrels per day. The new order terminates February 1, 1935. The total state allowable is 1,002,127.

The order was issued immediately upon advice from the Department of the Interior at Washington, recommending a total Texas allocation of 1,006,300 barrels per day for the remainder of December and the month of January, 1935. The commission allowance is 4,173 barrels below the allocation recommended by the Bureau of Mines.

Because of the mild winter which has enabled motorists to operate cars more freely than was anticipated when the December figures were prepared during the month of November, E. B. Swanson, Director of the Bureau of Mines, announced that consumer demand had proven far higher than was originally anticipated.

Most of the increase was allocated to the flush fields of the State which had been cut severely on September 1. Every district in the State with the exception of West Central Texas, shared in the increase.

Increases by districts were as follows:

District—	Dec. 17 Allowable	Dec. 18 Allowable	Inc.
Panhandle	56,800	58,800	2,000
North Texas	56,500	58,500	2,000
East Texas	403,965	420,070	16,115
East Central Texas	46,552	52,102	5,550
West Texas	129,717	148,102	18,385
Southwest Texas	55,580	55,767	187
Gulf Coast	161,533	177,786	16,253
West Central Texas	31,000	31,000	...
Totals	941,647	1,002,127	60,480

Since the commission was able to issue its order at once, the necessity for a statewide hearing on December 22 was eliminated, and this meeting cancelled. The next hearing will probably be held during the latter part of January when federal allocations for February become available.

East Texas

The new allowable for East Texas of 3.6 percent of the hourly potential increased the total allowance for the field to 420,070 barrels per day. The new percentage factor is the same as the one which was in effect on December 1, at which time it had been cut to 3.45 percent. This raised the top allowable of the field by 16,115 barrels.

On December 10 the commission completed its monthly series of bottom-hole pressure tests in the field, with astounding results. An increase of 19 pounds in the average pressure for the field was reported, this rise having taken place since the last series of tests were completed about November 10. The average was found to be 1245.5 pounds.

The change was more remarkable in that the tests for the previous month had indicated a drop of five pounds. Major company tests completed on the first of December indicated a rise of only approximately one pound.

Gordon Griffin, chief petroleum engineer for the commission, pointed out that the new average is eight pounds higher than it was when the first commission bottom-hole pressure tests were completed in June, 1933.

The field has produced 280,000,000 barrels of allowable oil since that time, yet the pressure has risen eight pounds. Griffin would make no estimate of the amount of "hot" oil which may have been withdrawn over this period.

In the face of this evidence, he felt that an allowable above 400,000 barrels per day could be produced from the field without waste of pressure, and it was on the basis of this recommendation that the commission ordered the increase.

West Texas

The West Texas district, however, received the largest increase, which was 18,385 barrels per day, resulting in a total district allowable of 148,102 barrels.

The Yates field was raised 9330 barrels per day to 46,500 barrels. This was the third largest increase granted to any field. East Texas receiving the greatest increase, with Conroe second.

Howard-Glasscock was increased 3500 barrels to 17,500 barrels per day. South Ward was given 2200 barrels additional oil, fixing the allowable for that field at 10,000 barrels.

Iatan-East Howard was increased 1300 barrels to 3000 barrels and Ector-Penn was raised 1250 barrels to 6250 barrels. Increases were granted to six other fields in the district, while two fields were reduced slightly.

Two new fields were designated and received allocations for the first time. The Crane-Waddell field was given an allowable of 30 barrels, and the Walker field was assigned 25 barrels.

East Central Texas

The allowable for Van was increased 5550 barrels per day to 42,750 barrels. This was the only change made in the allowable for fields in this district, and indicates recognition of the request of the Pure Oil Company for additional production in that field.

Gulf Coast

An increase of 9540 barrels was granted to Conroe in the Gulf Coast district. This was the second largest increase granted to any one field and brought the field allowable to 47,700 barrels.

High Island was raised 1700 barrels to 8500 barrels per day, Manvel was increased 1500 barrels to 5500 barrels per day, and Tomball was granted an increase of 1000 barrels, bringing the allowable for that field to 5000 barrels daily.

Ten other fields in the district received small increases. The only reduction was in the New Hull field, which was 173 barrels, resulting in an allowable of 4327 barrels per day.

Southwest Texas

The Southwest Texas district was increased a total of 187 barrels. Moca was raised 175 barrels to 445 barrels per day. Small increases were ordered in Jacobs and Saxet.

The only cut was a reduction of 75 barrels in the allowable for Sarnosa, resulting in an allowable of 900 barrels per day.

Other Districts

An increase of 2000 barrels per day in the Panhandle was ordered. This brought the total district allowable to 58,800 barrels, and is the first increase in this field for nearly a year.

North Texas also received a 2000-barrel increase, bringing the district allowable to 58,500 barrels. The allowable of 56,500 barrels formerly effective had remained unchanged throughout the past year, despite a large increase in the number of producing wells in the sector.

The allowable for West Central Texas remaining unchanged at 31,000 barrels per day.

Crude Oil Output Registers Usual Mid-Month Decrease

UNITED STATES crude oil production last week underwent the decrease that commonly occurs in the latter half of each month, but was still a large amount above the allowable.

Averaging 2,410,335 barrels per day, the nation's output for the week, that is, the period ending December 22, was 8165 barrels below the daily average of the previous week, and 103,335 barrels above the federal agency allowable of December 1.

In accordance with customary practice, Oklahoma and California registered declines in output last week, and were largely responsible for the small national decrease. In both states it is customary for production to spurt considerably above the allowable in the opening portion of each month, and then to decline later in the month, the early excesses being at least partially compensated by the later curtailed output. That situation arises out of the rush of operators to claim their allowables as early in the month as possible.

Last week California's production declined by 8000 barrels daily, coming down to 488,000 barrels per day. The state's allocation from the federal government as of December 1 was 456,800 barrels daily.

Oklahoma production came down 5465 barrels from the previous week's level, in averaging 481,535 barrels daily. The allocation to the state was 451,600 barrels daily.

Texas output rose by the small amount of 1200 barrels daily, averaging 948,500 barrels per day in the new week. The state quota fixed December 1 was 941,300 barrels daily.

Kansas yielded 131,800 barrels daily in the week of December 22, compared with 126,950 barrels daily the previous week, and an allowable of 123,900 barrels daily.

Louisiana production continued in excess of the allowable, averaging 107,500 barrels a day, or 900 barrels per day more than in the previous week, although the Louisiana quota was only 94,000 barrels per day on the federal government's schedule.

Last week there was again only a relatively unimportant amount of crude production outside of recorded output, that is, in the form of unreported, hot oil. Such production has occurred lately primarily in the East Texas field. But with the state control of intra-state oil shipping added to federal control of interstate shipping in the past two weeks, the output of hot oil has apparently been cut down to possibly 10,000 barrels a day or less. Before the state tender program was instituted December 10 East Texas hot oil was averaging from 25,000 to 50,000 barrels daily, and prior to inauguration of the federal tender program such production was averaging over 100,000 barrels daily.

While last week's production was substantially above the allowable, the excess was not a cause for anxiety, in view of the fact that during the week came announcement that the federal government was immediately increasing allowables. The increases were based on recommendations of the United States Bureau of Mines to bring up inventories and to provide for expected additional gasoline consumption in the early spring. The increased quotas, raising the national allowable 153,300 barrels daily, or from 2,307,000 to 2,460,300 barrels per day, was made effective December 17, and is to apply during the remainder of December and during January.

A member of the Texas Railroad Commission was instrumental in precipitating the revision of allowables, having gone to Washington to present evidence of market demand for about 30,000 barrels additional oil daily for filling an order for 1,000,000 barrels of East Texas crude for export to England, and to show market demand for about 35,000 barrels daily additional for domestic use. Texas was consequently granted a 65,500-barrel increase of allowable. The remainder of the 153,300-barrel increase went to other states.

The second largest increase, 37,700 barrels, went to Oklahoma, and the third largest, 17,100 barrels, to California. For those three leading producing states the new allowables are as follows: Texas, 1,006,800 barrels daily; Oklahoma, 489,300 barrels, and California, 473,900 barrels. The Kansas allowable was raised 13,200 barrels, from 123,900 barrels, and that of Louisiana, 5700 barrels, from 94,000 barrels.

California Drilling Permits Show Increase

Los Angeles.—At the close of week of December 8, notices of new wells to start in California numbered 600 for 1934, against 570 for the same period of 1933. For the last week mentioned 15 notices were filed indicating the start of that number of new wells.

So far this year, deepening and redrilling jobs number 617 against 744 for same period last year. For same period this year, 293 wells have been abandoned compared with 329 for the same period last year. Abandonments include both old producers and dry holes.

United States Crude Oil Production

Estimates compiled by The Oil Weekly

District or State	Barrels Daily for Week Ending Dec. 22	Dec. 15
TEXAS—		
Texas Panhandle	57,300	58 100
North Texas	56,100	56,250
West Central Texas	26,900	26,550
West Texas	137,500	137.650
East Central Texas	46,800	47,000
East Texas Field	403,400	401,450
South Texas	55,600	55,050
Texas Gulf Coast	164,900	165,250
Total Texas	948,500	947,300
OKLAHOMA—		
Oklahoma City	162,075	165.400
Seminole Area	113,975	115,350
Tatums	5,750	5,500
Lucien	8,085	8,775
Others	191,650	191,975
Total Oklahoma	481,535	487,000
KANSAS—		
Ritz-Canton	12,325	10,100
Voshell	5,700	5,500
Nikkel-Hollow	10,375	9,675
Sedgwick	7,775	7,650
Others	95,625	94.025
Total Kansas	131,800	126,950
LOUISIANA—		
North Louisiana	23,700	23,400
Louisiana Gulf Coast	83,800	83 200
Total Louisiana	107,500	106,600
ARKANSAS	30,900	30,650
CALIFORNIA—		
Long Beach	65,000	64,000
Santa Fe Springs	38,500	38.500
Huntington Beach	43,000	43,000
Dominguez	19,000	18,500
Inglewood	10,000	10.500
Ventura Avenue	21,500	23,500
Seal Beach	7,500	7.000
Midway-Sunset	55,000	49,500
Elwood	8,000	9,000
Kettleman Hills	59,000	58.000
Mountain View	10,000	12.000
Playa del Rey	8,500	9,500
Others	143,000	153,000
Total California	488,000	496,000
MOUNTAIN STATES—		
Wyoming	35,800	36 500
Montana	11,500	11,100
Colorado	3,100	3,200
Total Rocky Mountain States	50,400	50,800
NEW MEXICO	45,700	45,400
EASTERN STATES	98,100	99,300
MICHIGAN	27,900	28,500
Total United States	2,410,335	2,418,500

Crude Runs to Stills; Finished and Unfinished Gasoline; Gas and Fuel Oil Stocks, and Cracked Gasoline Production, Week Ended December 15, 1934

(Figures in thousands of barrels of 42 gallons each)

DISTRICT	Daily Refining Capacity of Plants			Crude Runs to Stills		Stocks of Finished Gasoline			(a) Stocks of Unfinished Gasoline	(b) Stocks of Other Motor Fuel	Stocks of Gas and Fuel Oil	Daily Charging Capacity of Cracking Units			Cracked Gasoline Production
	Potential Rate	Reporting		Daily Average	% Operated	At Refineries	Bulk Term., in Trans. & Pipe Lines	Total at Refys., Term., etc.				Potential Rate	Reporting		Daily Average
		Total	%										Total	%	
East Coast	582	582	100.0	438	75.3	3,852	7,491	11,343	942	250	14,050	496	471	95.0	82
Appalachian	150	140	93.3	99	70.7	756	1,002	1,758	280	45	1,544	69	69	100.0	23
Ind., Ill., Ky.	446	422	94.6	314	74.4	2,514	4,313	6,827	663	70	5,357	325	309	95.1	101
Okla., Kans., Mo.	461	386	83.7	250	64.8	2,231	1,629	3,860	508	565	3,885	256	238	93.0	59
Inland Texas	351	167	47.6	93	55.7	1,057	105	1,162	231	455	1,720	82	66	80.5	24
Texas Gulf	566	552	97.5	502	90.9	4,398	236	4,634	1,248	200	10,508	358	355	99.2	103
Louisiana Gulf	168	162	96.4	121	74.7	653	301	954	180	.....	4,413	71	71	100.0	22
North La.—Ark.	92	77	83.7	40	51.9	178	84	262	64	40	543	41	38	92.7	7
Rocky Mountain	96	64	66.7	41	64.1	558	.....	558	96	50	757	46	42	91.3	14
California	848	822	96.9	428	52.1	8.142	2,260	10,402	835	2,625	68,459	209	209	100.0	47
TOTALS WEEK: December 15, 1934	3,760	3,374	89.7	2,326	68.9	24,339	17,421	41,760	5,047	4,300	111,236	1,953	1,868	95.6	482
December 8, 1934	3,760	3,374	89.7	2,289	67.8	23,671	17,423	41,094	4,865	4,250	112,403	1,953	1,868	95.6	467

Below are set out estimates of Crude Runs and Cracked Gasoline Production on B. of M. Basis for Week December 15, 1934 compared with December, 1933 Bureau figures.

Estimate B. of M. Basis December 15, 1934	2,525		535
Estimate B. of M. Basis December 8, 1934	2,475		515
U. S. B. of M. December, 1933: Daily Average Crude Runs	2,272	U. S. B. of M. December, 1933: Daily Average Cracked Production	461

(a) Amount of Unfinished Gasoline contained in Naphtha Distillates.
(b) Estimated. Includes Unblended Natural Gasoline at refineries and plants; also Blended Motor Fuel at plants.

Summary of Field Results During Past Week

State	Completions	Oil wells	Gas wells	Failures	Init. prod.
Arkansas	5	4	0	1	3,060
California	13	11	0	2	13,270
Colorado	1	0	0	1	0
Indiana	11	4	4	3	200
Kansas	20	18	0	2	12,815
Louisiana	21	10	2	9	4,350
Michigan	5	2	0	3	770
Montana	4	4	0	0	675
New Mex.	7	5	0	2	6,105
Ohio	26	6	12	8	160
Oklahoma	37	20	1	16	11,000
Penn'alva.	2	1	1	0	1
Texas	190	132	7	51	564,370
West Va.	13	4	8	1	67
Wyoming	2	1	1	0	60
Total	355	222	36	99	617,103

Comparison of Permits Granted For New Wells

State	Week ending Dec. 22	Total this month	Total this year	Total this date last year	1933 year total
Arkansas	2	14	104	47	47
California	15	59	662	557	593
Louisiana	25	42	758	738	755
Kansas	16	63	744	663	682
Michigan	7	27	423	413	420
Oklahoma	42	129	1,442	1,288	1,315
Texas	199	595	11,104	7,648	7,845
Total	306	929	15,247	11,354	11,651

Capital Increase Voted By Humble Stockholders

Houston, Texas.—Humble Oil & Refining Company December 17, by resolution of its stockholders, amended its charter and increased its capital from $75,000,000 to $175,000,000. The action was taken so that the book account could be made to conform with the actual facts.

No change is involved in the number or character of the capital stock of the company, consisting of 9,000,000 shares, non-par value.

Concerning the action, the company issued the following statement:

"The company, since its organization, has followed the policy of reinvesting in its business practically its entire earnings each year above the amount necessary for the payment of reasonable dividends. The book surplus for this reason actually represents invested capital, and not surplus in the ordinary sense of the word. This ploughing back of earnings has enabled the company annually to increase its business, increase its field of operations, and increase its employment. In order that the books might be made to reflect the true character of the company's invested capital, it was necessary that this charter amendment be filed."

Gasoline Consumption Continues Above Last Year

Washington, D. C.—Gasoline consumption continues to run ahead of last year, the Internal Revenue Bureau indicated December 20 in its monthly report showing November collections under the gasoline tax at $13,095,318, as compared with $17,037,101 in the same month in 1933. Although the total collections were under last year, the consumption was greater, it is shown, the 1933 tax being one and one half cents a gallon as against one cent a gallon at present.

Receipts from the lubricating oils tax were $2,013,916, against $1,692,215 last year. The report also shows the collection of $764,007 on the transportation of oil by pipe line against $749,392 last year, and the receipt of $148,528 on the processing of crude petroleum under the tax which went into effect a few months ago.

Crude Oil Price Quotations

(Figures Represent Basic or Flat Prices—Revised to December 21, 1934)

DISTRICT	Low Grav.	Dif.	High Grav.	Date
Oklahoma-Kansas	28—$ .84	2¢	40—$1.08	9-29-33
N. and N.-C. Texas	28— .79	2¢	40— 1.03	9-29-33
Texas Panhandle				
Gray County	34— .79	2¢	40— .91	9-29-33
Carson-Hutchinson	34— .69	2¢	40— .81	9-29-33
West Texas				
Ector, Pecos, Wk'lr	*.75			9-29-33
Crane, Upton, Howard and Glasscock	*.70			9-29-33
East Texas	*1.00			9-29-33
Texas Gulf Coast				
Conroe	35— 1.09	2¢	40— 1.19	9-29-33
Tomball	*1.15			9-29-33
Cleveland	*1.00			1-11-34
†Goose Creek, Hull Liberty, Orange, Pierce Junction, Moss Bluff, Raccoon Bend, Sour Lake, Spindletop, Sugarland, West Columbia, Humble, Rabbs Ridge	Below 20— .82	2¢	34— 1.12	9-29-33
South and S.W. Texas	Below			
Refugio (Light)	20— .82	2¢	34— 1.12	9-29-33
Refugio (Heavy)	*.85			9-29-33
Saxet	*.85			9-29-33
Mirando	*.80			9-29-33
Pettus	*1.05			9-29-33
Salt Flat	*.87			9-29-33
Darst Creek	*.87			9-29-33
Arkansas				
El Dorado (Light) and Rainbow	29— .79	2¢	40— 1.03	3-17-34
El Dorado East Field and Smackover	*.70			9-29-33
North Louisiana	29— .79	2¢	40— 1.08	9-29-33
Urania	*.85-*.87			1- 1-34
South Louisiana	Below			
Lockport	20— .80	2¢	34— 1.10	9-29-33
Iowa, Cameron Mds.	Below 20— .70	2¢	34— 1.00	9-29-33
Rocky Mountain States				
Salt Creek	29— .84	2¢	40— 1.08	9-29-33
Elk Basin	*1.17			9-29-33

*All gravities—flat rate.
†Gulf Coast prices as posted by Humble Oil & Refining Company.

DISTRICT	Low Grav.	Dif.	High Grav.	Date
Grass Creek (Light)	*$1.17			9-29-33
Big Muddy	*1.01			9-29-33
Rock Creek	*1.02			9-29-33
Sunburst	*1.35			9-29-33
Lance Creek	*1.02			8-25-33
Osage	*.62			8-25-33
Cat Creek	*.45			8-25-33
Pondera	*.65			8-25-33
Hog Back, N. M.	*1.00			9- 8-33
Lea County, N. M.	*.75			9-29-33
Mid-West States				
Lima	*1.30			9-29-33
Illinois	*1.13			1- 5-34
Princeton	*1.13			1- 5-34
Western Kentucky	*1.08			5-26-34
California				
Signal Hill	14— .65	1¢	16— .66	9- 6-33
	17— .69	2¢	22— .84	9- 6-33
	23— .88	3¢	30— 1.09	9- 6-33
Seal B., Alamitos Hts.	19— .65	3¢	20— .68	9- 6-33
	21— .72	4¢	22— .76	9- 6-33
	23— .81	4¢	26— .93	9- 6-33
	27— .98	4¢	30— 1.10	9- 6-33
Huntington Beach	14— .65	4¢	15— .69	9- 6-33
	16— .72	3¢	19— .81	9- 6-33
	20— .83	3¢	28— 1.07	9- 6-33
	29— 1.09	3¢	30— 1.12	9- 6-33
Inglewood	14— .65	4¢	16— .73	9- 6-33
	17— .76	4¢	18— .80	9- 6-33
	19— .83	4¢	20— .87	9- 6-33
	21— .90	4¢	22— .94	9- 6-33
	23— .97	4¢	24— 1.01	9- 6-33
Playa del Rey	14— .65	1¢	15— .66	9- 6-33
	16— .69	4¢	17— .73	9- 6-33
	18— .76	4¢	19— .80	9- 6-33
	20— .83	4¢	21— .87	9- 6-33
	22— .90	4¢	23— .94	9- 6-33
	24— .97	3¢	25— 1.00	9- 6-33
			26— 1.04	9- 6-33
Olinda-Brea Canyon	14— .65	4¢	16— .73	9- 6-33
	17— .76	3¢	28— 1.10	9- 6-33
Athens-Rosecrans Domingues	23— .83	3¢	24— .86	9- 6-33
	25— .90	4¢	26— .94	9- 6-33
	27— .97	3¢	29— 1.04	9- 6-33
	30— 1.08	4¢	31— 1.12	9- 6-33
			32— 1.15	9- 6-33
Elwood (fob ship)	33— 1.03	3¢	37— 1.15	9- 6-33
Torrance	14— .65	1¢	15— .66	9- 6-33
	16— .69	3¢	20— .81	9- 6-33
	21— .83	3¢	26— .98	9- 6-33

*All gravities—flat rate.

DISTRICT	Low Grav.	Dif.	High Grav.	Date
Richfield	15—$ .65	2¢	16—$ .67	9- 6-33
	17— .70	4¢	20— .82	9- 6-33
	21— .85	4¢	22— .89	9- 6-33
	23— .93	4¢	24— .97	9- 6-33
	25— 1.00	4¢	27— 1.08	9- 6-33
	28— 1.11	4¢	29— 1.15	9- 6-33
Whittier-LaHabra	15— .65	3¢	18— .74	9- 6-33
	19— .78	3¢	24— .93	9- 6-33
Montebello	19— .65	1¢	20— .66	9- 6-33
	21— .69	3¢	22— .72	9- 6-33
	23— .76	4¢	24— .80	9- 6-33
	25— .85	4¢	26— .89	9- 6-33
Coyote Hills	16— .65	3¢	19— .74	9- 6-33
	20— .78	3¢	29— 1.05	9- 6-33
	30— 1.09	3¢	34— 1.21	9- 6-33
Santa Fe Springs	21— .72	4¢	22— .76	9- 6-33
	23— .79	4¢	25— .87	9- 6-33
	26— .90	4¢	28— .98	9- 6-33
	29— 1.01	4¢	30— 1.05	9- 6-33
	31— 1.08	4¢	33— 1.16	9- 6-33
	34— 1.19	4¢	35— 1.23	9- 6-33
	36— 1.26	4¢	38— 1.34	9- 6-33
New Hall, McKittrick, Kern River	14— .57		19— .57	9- 6-33
Midway-Sunset, Elk Hills, Buena Vista Hills	17— .57	4¢	18— .61	9- 6-33
	19— .64	3¢	22— .73	9- 6-33
	23— .77	4¢	33— 1.17	9- 6-33
Lost Hills	17— .57	4¢	21— .73	9- 6-33
	22— .76	3¢	30— 1.00	9- 6-33
Coalinga	17— .57	1¢	18— .58	9- 6-33
	19— .62	3¢	21— .68	9- 6-33
	22— .72	3¢	25— .81	9- 6-33
Wheeler Ridge	17— .57	1¢	18— .58	9- 6-33
	19— .61	3¢	25— .79	9- 6-33
Kettleman Hills	33— .93	3¢	39— 1.11	9- 3-33
Pennsylvania				
Bradford	*2.05			12- 6-34
Sw Pa. Pipe Line	*1.72			12- 6-34
Eureka Pipe Line	*1.67			12- 6-34
Buckeye Pipe Line	*1.57			12- 6-34
Corning Grade	*1.32			10- 2-33
Michigan				
Central Michigan	*1.20			9-30-33
Muskegon	*.70-1.00			12-31-32
Canada				
Petrolia	*2.10			9- 9-33
Oil Springs	*2.17			9- 9-33

*All gravities—flat rate.

Gasoline Price Down, Taxes Up, at Year-End

New York.—Despite codes and charges of profiting at the expense of the public, final gasoline price figures for 1934 show that motor fuel was cheaper on December 1, 1934, than on January 1.

Reports of retail prices and taxes in 50 representative cities, received by the American Petroleum Institute as of December 1, indicate the average retail price was 12.47 cents per gallon, as compared with 14.33 on January 1. Average gasoline taxes were 5.22 cents per gallon, as compared with 5.18 cents on January 1, 1934. The cost of gasoline to the public (price plus tax) on December 1 was 17.69 cents per gallon against 19.51 cents on January 1.

The highest average price during the year was the January 1 figure, 14.33 cents, and the lowest was 11.72 cents reported on November 1. Variations in tax rates made the highest average cost to the public 19.52 cents per gallon on June 1, and the lowest 16.93 cents on November 1.

During the year the Consumers Advisory Board charged that advancing prices under the NRA Petroleum Code would increase motor fuel costs to the public by several hundred millions of dollars. Instead, there was an actual reduction in costs, supporting the Federal Trade Commission's report pointing out that the larger source of cost to the public lay in the $700,000,000 annual taxes on gasoline.

MAJOR PRICE CHANGES

	Penns. (Nat. Tr.)	Mid-Cont. (36 Gr.)	Calif. (26 Gr.)
March 5, 1933	.....	.....	Cut 24.
May 2, 1933	.....	Cut 19.	.....
May 9, 1933	Cut 20	.....	.....
May 22, 1933	Up 10.	.....	.....
June 19, 1933	Up 10.	Up 19.	.....
June 26, 1933	Up 10.	.....	Up 9-12
July 6, 1933	Up 13.	Up 10.	.....
July 17, 1933	Up 15.	.....	.....
July 28, 1933	Up 15.	.....	.....
August 11, 1933	Up 10.	.....	.....
August 24, 1933	.....	Up 10.	.....
August 30, 1933	Up 15.	.....	.....
September 6, 1933	Up 10.	Up 10.	Up 15.
September 8, 1933	.....	Up 15.	.....
May 1, 1934	Up 10.	.....	.....
November 6, 1934	Cut 25	.....	.....
December 6, 1934	Cut 25.	.....	.....

CRUDE PRODUCTION TAXES

Oklahoma—Three percent of gross value less royalty interest.

Texas—Two cents or 2 percent, whichever is higher.

Louisiana—From four to 11 cents a barrel, depending upon gravity.

Arkansas—2.6 percent of gross market values.

Montana—Three percent of gross value at well and ½-cent per barrel.

Wyoming and New Mexico—Production tax based upon state and county assessments.

California—.66443 mills per barrel of oil produced and 17.39 cents per acre on proved oil lands.

Major Buyers Strengthen East Texas Gasoline

GASOLINE purchases by major companies injected a stronger tone to the East Texas gasoline price structure during the past week. Approximately 800 cars of gasoline supported by the required tenders have been absorbed by the majors lately, and it is understood that buying will be continued in the face of rising prices if the volume of gasoline turned out by other East Texas plants from illegal crude remains at a low level. Tendered gasoline was moving at a price range of 3½ to 3¾ cents per gallon toward the close of the past week, while the production of the plants that persist in operating on hot oil for tank truck movement varied from 2 to 2½ cents per gallon.

Illegal production was estimated at between 10,000 and 15,000 barrels daily, according to a mid-week check, with eight of the 15 operating plants absorbing the bulk of this illicit crude. Since the four railroads serving the district are adhering to the state and federal ban against moving petroleum products lacking approved tenders, the consumers of hot oil are restricted to tank truck shipments in marketing their production, while the heavy ends such as fuel, gas oil and distillates are being stored. Some plants continue to defy the state in diverting their burning oil material to earthen pits.

Rail shipments of refined and semi-refined products declined 214 cars during the week ending December 16. Total shipments for the period was placed at 1338 cars, or approximately 11,448,294 gallons, including 980 cars supported by tenders and 358 cars moved during the fore part of the week without tenders as the other requiring tenders on intrastate shipments did not become effective until December 20. Tank car traffic in topped crude dropped from 6,099,593 gallons to 2,479,354 gallons during the past week while gasoline shipments increased 1,687,808 gallons.

Tank truck movement of gasoline derived from hot oil will continue as long as plants processing this type of crude can provide storage for their heavy ends which is refused clearance by the two tender boards. The railroad commission is not adequately manned to patrol the highways in stopping truck cargoes lacking tender papers but is endeavoring to discourage refiners and truckers by filing injunctions in state courts. Unless promptly prosecuted such violations will continue in the face of the court restraining orders. However the plants specializing in hot oil can not exist for any appreciable period while sales are restricted to tank truck sales at sacrifice prices as the net returns are not sufficient inducement.

Louisiana to Tax Gasoline Production

Shreveport, La.—Louisiana refineries were heavily hit by a five cents per barrel tax on refined oil levied by the Louisiana legislature in special session Thursday. The law will become effective 20 days after the governor signs it which is a foregone conclusion.

Daily capacity of refineries in Louisiana is 214,850 barrels and if refineries operate at full capacity they will pay the state $10,742.50 daily or $3,921,012.50 annually on the basis of 365 days. Total refinery runs in Louisiana during November were 4,290,000 barrels. The largest refinery in the state is that of Standard Oil Company of Louisiana at Baton Rouge with 90,000 barrels daily capacity. Refinery runs in North Louisiana averaged 29,100 barrels daily in November and the tax will cost them on the basis of that average run over a year's period approximately $500,000.

PROTECTION is the Keystone upon which the World-wide use of **BAROID** Products has been built—*plus Economy and Reliability*

BAROID ★ AQUAGEL ★ STABILITE
A Complete Drilling-Mud Service

BAROID
Extra-Heavy Colloidal Drilling Mud

AQUAGEL
Trouble-Proof Colloidal Drilling Mud

STABILITE
An Improved Chemical Mud Thinner

THE use of BAROID, AQUAGEL and STABILITE for the solution of drilling mud problems affords ample protection against drilling hazards and provides economy and reliability that assure a most tangible form of low-cost insurance.

From Texas to Borneo, oil producers agree that scientifically controlled and properly conditioned mud is an indispensable part of modern drilling. These operators have proven to their satisfaction that BAROID Products PROTECT the safety of the drilling investment.

Our long experience with drilling mud problems has supplied us with a vast amount of valuable data. We are pleased to extend our fullest cooperation and counsel to those interested in the most effective use of mud materials. This service is yours for the asking. Why not get in touch with us today?

BAROID SALES CO.
LOS ANGELES • HOUSTON
NATIONAL PIGMENTS & CHEMICAL CO.
ST. LOUIS

HIGH SPOTS IN BRIEF

Arkansas

The newly discovered Taylor sand in the old Rainbow City field, Union County, was extended in two directions last week. One extension was a quarter mile south by a 200-barrel well and the other was one half mile northwest, where a 1275-barrel well was completed. Another new producing horizon was found in the field during the week, when a well commenced flowing 1550 barrels of 33 gravity oil through a two-inch choke at 3321 feet. The well, which recently found a new sand at 3466 feet, is being placed on the beam as a pumper.

California

A new gas field may be opened at Marysville Buttes in Sutter County, northern California. Ninety-pound mud is being used to control the well, which is within 50 miles of Sacramento.

Texas Gulf Coast

A new sand has been found in the Hankamer field, Liberty County. A drill stem test showed good indications of commercial production at 5128-62 feet. Interest in the Coast area is centered on a wildcat in the Hastings area, Brazoria County, which promises to open a new Marginulina producing field.

Louisiana Gulf Coast

The Bosco field, Acadia and St. Landry Parishes, was extended a half mile south and slightly northwest during the week.

South Texas

A new field and a new sand was found at West Tuleta, Bee County, last week. The new pool is two miles west of the north end of West Tuleta, while the new sand was found on the east side of the pool. Two new fields, one on the east side and the other on the west side of Government Wells, were opened in Duval County. Each are from different sands and are looked upon as of considerable importance. Neither have been fully tested. A deeper producing sand apparently has been found in the Sinton field, San Patricio County, with the discovery well flowing 60 barrels daily. A wildcat in Kerr County is showing for a producer, having 1500 feet of oil at 3530 feet that cannot be lowered by swabbing. The Samfordyce field, Hidalgo County, was extended 600 feet south last week. The Pearsall prospect test, Frio County, has plugged back and is making 15,000,000 cubic feet of gas.

Panhandle

The Gray County wildcat on the south flank of the granite ridge registered an increased output when deepened. It is making 10 barrels hourly along with 2,000,000 cubic feet of gas.

West Texas

A new oil pool has been opened in Pecos County on a line between the Yates and Taylor-Link fields. A well is averaging 25 barrels daily.

New Mexico

A well one half mile east and north of South Jal, Lea County, production has been completed with a daily flow of 700 to 1000 barrels. East and west edge wells in the Eunice field, also Lea County, proved above the average. Irregular production developed the past week in the Cooper field, Lea County.

Michigan

Use of acid on a Midland County wildcat test resulted in it flowing 280 barrels the first 24 hours and 125 barrels the third day. It is three miles east of production in the Porter township.

East Texas

The East Texas field was given two important extensions last week. One half mile west and slightly farther north of nearest production a well has been completed for 90 barrels hourly, and a 75 barrel per hour well added 2000 feet to the north edge of its particular sector during the week.

Government to Make 1934 Oil Producing Cost Survey

Washington, D. C.—Effects of the petroleum code upon the cost of producing oil will be developed by a survey of 1934 costs authorized December 18 by Oil Administrator Harold L. Ickes.

Explaining that the inquiry will be an extension of the survey of 1931-33 costs, just completed by the Petroleum Administrative Board, in the course of which the first three months of code operation were studied, advisers to the administrator recommended that the 1934 costs be investigated to obtain a complete picture of conditions before and after adoption of the code.

Because of the fact that the extensive groundwork necessary for a cost survey was laid during the original investigation it is not anticipated that the 1934 study will require any great amount of time for completion.

Orders providing for the survey call upon all persons, "natural or artificial engaged in the production of petroleum to the extent of 5000 barrels per annum in all states east of the Mississippi River and the states of Colorado, Montana and Wyoming, and to the extent of 10,000 barrels per annum in all other states" to furnish the information which will be sought by means of cost schedules now being distributed.

The 1931-33 survey showed that heavy increases in average selling prices followed the adoption of the code, with lesser increases in average production costs.

In California, the 1931 average cost was 68.9 cents per barrel and average selliing price 70.5 cents; in 1932, 65 cents cost and 79.9 cents selling price; for the first nine months of 1933, 60.1 cents cost and 79.2 cents selling price, and for the last three months of 1933, 61.5 cents cost and 92.4 cents selling price.

For the Mid-Continent and Gulf area, the cost and selling price averages were, respectively: 1931, 90.1 cents and 57.6 cents; 1932, 80 cents and 84 cents; first nine months of 1933, 67.3 cents and 48.1 cents; last three months of 1933, 75.8 cents and 96.5 cents.

For the Rocky Mountain area: 1931, $1.194 and 87.8 cents; 1932, $1.185 and 97.2 cents; first nine months of 1933, $1.180 and 77 cents; last three months of 1933, $1.080 and 91.8 cents.

For Eastern States: 1931, $1.807 and $1.396; 1932, $1.592 and $1.387; first nine months of 1933, $1.556 and $1.239; last three months of 1933, $1.580 and $1.770.

General average, all states: 1931, 89.4 cents and 64.3 cents; 1932, 80.8 cents and 85.8 cents; first nine months of 1933, 69.9 cents and 57.8 cents; last three months of 1933, 77.2 cents and 99.2 cents.

The averages for the last three months of 1933 cover slightly more than 50 percent of the production, 90 percent of which was produced at or below $1.20 per barrel in California, $1.12 per barrel in the Mid-Continent and Gulf area, $1.77 per barrel in the Rocky Mountain area, and $2.60 per barrel in the East.

For the calendar year 1933 the weighted average gravity of oil produced for the country as a whole was 34.4 degrees, California with an average of 27.3 degrees showing the lowest gravity, and the Eastern area with an average of 40.5 degrees the highest.

455 Persons Cited for Violating Texas Tenders

Longview, Texas.—Court action against 455 individuals was started here December 19 when the Attorney General's Department of Texas filed suits charging violation of the order of the Railroad Commission which requires a tender before petroleum products may be moved intra-state.

Judge W. C. Hurst granted injunctions against 349 defendants after seven petitions were filed. Two other petitions were filed against 106 defendants.

In addition to the restraining order the petition contemplates penalties upon conviction of violation of the order. Representatives of the attorney general said they would seek to have defendants held in contempt of court should any continue to move products without tenders.

Cases Involving Federal Tender Program Passed

Tyler, Texas.—Pending a decision in the similar Panama and Amazon cases by the United States Supreme Court, Federal District Judge Randolph Bryant, December 19, passed four cases in which injunctions were sought in connection with the federal tender requirements in East Texas. Through the tenders the federal authorities regulate interstate shipping of crude and refined oils.

In one case the government has sought to enjoin R. J. McMurrey and M. H. McMurrey from shipping in interstate commerce refined products alleged to have been made from crude produced in excess of the state oil quotas.

In two separate cases Union Refining Company and Century Refining Company sought injunctions to restrain the Texas and Pacific and International-Great Northern railroads, respectively, from refusing to accept refined products supported by state but not federal tenders.

In the fourth case, A. G. Sadler, owner of Tyreco Refining Company, at Kilgore, sought madatory injunction to restrain the federal oil administration from enforcing the tender requirements until similar regulations are imposed throughout the United States.

State Restrained from Enforcing Tender Plan

Dallas, Texas.—The new intra-state oil shipping control program of the Texas Railroad Commission was successfully attacked in a state court here December 19, when Judge Claude C. McCallum granted a temporary restraining order here upon petition of the Phoenix Refining Company, of Dallas.

Through the order, state authoritites were restrained until midnight December 20 from injunction suits to compel the company to comply with the new tender requirements. Plaintiffs indicated a new order would be sought.

California Shipments Higher Than Last Year

Los Angeles.—For the first 11 months of 1934, total offshore tanker shipments of all petroleum products from California averaged 188,208 barrels daily, compared to 156,518 barrels daily for the same period in 1933. Figures for 10 months are from Bureau of Mines and November figures are estimates furnished by the Oil Producers Sales Agency of California.

Pacific foreign shipments for the period mentioned show an increase from 30,737,568 barrels of all products in 11 months in 1933 to 36,404,398 barrels in 1934. Of this total movement to Pacific foreign, mostly Japan, 18,114,527 barrels were fuel and 9,094,014 barrels were crude oil.

Creditul Minier Is Installing New Process

Installation by Creditul Minier of the Gray process for clay treating of cracked gasoline in Roumania is proceeding in accordance with arrangements recently completed between the two companies. The Creditul Minier installation is licensed in connection with their new (Dubbs) cracking unit.

Negotiated with Gray through their Roumanian agents, the firm of Herman Bensmann, the Creditul license is understood to be for a lump sum commuted fee, payable in monthly installments over an extended period.

There certainly is a SANTA CLAUS

Anybody
who has ever used
THE LAYNE
MILLED GROOVE SCREEN
will tell you that
Santa Claus will pay off thru anybody's Christmas tree when used with this screen.

LAYNE & BOWLER CO. HOUSTON TEXAS

Oil Taxes Average $1.11 Per Barrel

New York.—Taxes averaging $1.11 now are levied upon each barrel of crude oil costing 80.6 cents to produce, and selling at an average market price of 72 cents, it is revealed in a booklet, "The New Competition," recently published by the American Petroleum Industries Committee, 50 West 50th Street, New York. Copies are available from the Committee.

Pointing out that the tax collector has become the biggest and strongest competitor of the petroleum and other industries, the booklet declares that the collector is competing for every dollar in the consumer's pocket.

"Regardless whether taxes are levied upon you, upon the commodity you make or sell, or upon the consumer," the booklet informs oil men, "somebody has to pay them. Just that much money is taken from trade, and just that much market is closed to business."

The booklet presents a picture of a newly-devised "oil tax dollar," showing an additional section for the dollar to accommodate the roundly 118 taxes averaging $1.11 per barrel. The heaviest levies, based upon 1933 data, are shown to be state gasoline taxes, costing 57.26 cents per barrel and federal gasoline taxes costing 20 cents per barrel. Next heaviest are real and personal property taxes averaging 14.36 cents per barrel.

"Taxes are necessary for the support of government," the booklet says, "and we want the best government we can afford. Yet good government is not necessarily expensive, nor need adequate taxes be excessive.

"Industry cannot long face the competition of government for the consumer's dollar without being forced to accept, or to make, decreases in consumption, profits, dividends, and wages. A tax bill of $1,004,824,028 that of 1933, represents, in effect, a tax of roundly $1,000 per year upon every person engaged in the petroleum industry."

Road Commission Favors Gasoline Tax Reduction

Salt Lake City, Utah.—Utah's State Road Commission has gone on record not only as opposing the use of revenue from gasoline taxes and motor license fees for purposes other than highways, but as advocating a reduction in the gasoline tax as soon as income exceeds highway financing requirements. This is one of the first, if not actually the first, instance of an official state group announcing its advocacy of gasoline tax rate reduction. Utah's gasoline tax rate is four cents per gallon, plus one cent federal tax.

Commissioner Preston G. Peterson, in a letter to Burton W. Musser, of Salt Lake City, chairman of the Utah Petroleum Industries Committee, said that his commisssion had recommended in its annual reports of 1933 and 1934 that the non-diversion policy be continued and that all motor vehicle and gasoline tax income be used for roads.

"It will be some time before revenues catch up with necessary construction," he added. "When and if that time does arrive and the income from gasoline taxes and motor vehicles would seem to exceed the requirements for construction and maintenance of our roads, we feel that instead of the diversion of these funds to any other purpose, this commission would recommend in lieu thereof a reduction in the gasoline tax.

Oklahoma County Test Finds Wilcox

Edmond, Okla.—Mid-Continent Petroleum Corporation's Young 1, C SE SW NE 31-14n-3w, slightly over a half mile northwest of production in the Edmond pool, four miles west of here, in northwestern Oklahoma County, encountered top of the Wilcox sand at 6531 feet and cored to 6536½ feet, recovering six inches of highly saturated sand with a strong odor of gas.

Compared with the nearest well, Marathon Oil Company's Dahl 1, C SE SE SE 31-14n-3w, it is 156 feet low, which apparently is due to thickening of the interval between Oswego lime and top of the Wilcox sand as well as to northward plunge of the structure. Despite this difference in elevation it is expected to make a big well.

Haven, Kansas.—McBride Incorporated et al's Popp 1, SW SW NE 32-24s-4w, wildcat test one mile north of here and six miles south of the Burrton-Haury pool in eastern Reno County, encountered Wilcox sand at 3879 feet, and drilled to 3882 feet where it was abandoned with a hole full of water. It found water also in the chat and Hunton lime.

Carbon County

Billings, Mont.—Ohio Oil Company completed Agnes Maddux 14, NW NW 10-7s-21e, in the Dry Creek field, Carbon County, southern Montana, for a small well. The well flowed 252 barrels the first 24 hours and 287 barrels the second 24 hours. Hole is plugged back from the Lakota sand, where it had water to the Dakota at 5958 fet. The well is an outside location on the south flank of the field.

Pontotoc County Test Flows After Acid Dose

Jesse, Oklahoma.—J. B. Sledge et al's Thompson 1-A, SW NE SW 1-1n-7e, less than a half-mile east of here and 4½ miles east of production in the Fitts pool in southeastern Pontotoc County, flowed 104 barrels net in 24 hours after being reacidized with 2000 gallons and using a 275-barrel oil load. Production is from Hunton lime at 3833 to 3880 feet with total depth at 3888 feet, the point to which the hole was plugged from 4110 feet, one foot in Sylvan shale.

Paramount Petroleum Company's Graham 1, SW SE SW 13-1n-7e, two miles south of here and 5½ miles southeast of the Fitts pool, was coring sand said to be saturated at 970 feet.

Logan County Test Cores Sand Streaks

Crescent, Okla.—The Texas Company's Denny 3, C NE NE SE 33-17n-4w, in the Crescent pool near here in western Logan County, cored from 4865 to 4871 feet, recovering one foot and nine inches of shale and three inches of sand with shale streaks, then cored from 4871 to 4880 feet, and broke the hoisting equipment before reaching the surface with the core.

One well, Eason Oil Company's Katschor Acct. 2 No. 3, NW SW SW 34-17n-4w, on the southern edge of production, was reported to have 4000 feet of water in the hole. Samples taken from the well were so badly mixed that analysts were unable to determine its origin. This well made 724 barrels in six hours and was estimated making gas at the rate of 3,000,000 cubic feet daily when completed in September of this year. It was not reported making any water at that time and showed a formation pressure of 2370 pounds at 6200 feet, 35 feet above the bottom of the hole.

Perry, Okla.—Stanolind Oil & Gas Company and Amerada Petroleum Corporation started building derrick for Dietz 1, C NW SW 27-20n-2w, south offset to Sinclair Prairie Oil Company's Cawood 1 which was recently completed for 895 barrels daily from Misener sand and extended production one mile to the east of the Lucien pool in southwestern Noble County. Cawood 1 was first reported to be producing from Viola lime which was topped at 4970 feet but now is correlated as Misener production topped at 4955 feet. It made approximately 12,000,000 cubic feet of gas.

2 HAYSTELLITED BITS *drill to* 3700 ft.

AT Hackberry, La., this 14-in. bit drilled to 2,180 ft. and was then replaced with a 9-⅞ in. bit which completed the hole at 3,700 ft. Both bits were hard-set with Haystellite Inserts and hard-faced with Haystellite Composite Rod.

● *This photograph shows the 14-in. bit after making 2180 ft. It is not retouched.*

Excellent performance—fast drilling and straight, out-to-gauge hole with long life between round trips—is the sure result when good bits are properly set and faced with Haystellite Inserts and Haystellite Composite Rod. The correct hard-setting and hard-facing procedures are described in a new book, "Haynes Stellite Products in the Oil Fields".

Get this Valuable Book

"Haynes Stellite Products in the Oil Fields" tells graphically how to forge, build-up, grind and preheat the drilling tool preparatory to the hard-setting and hard-facing operations. Then it follows with a detailed description of the correct spacing of Haystellite Inserts and the proper method of setting them on the face of the bit. Next is a section on hard-facing with Haystellite Composite Rod followed by procedures for finish grinding and heat-treating. Each step is fully described and illustrated.

Copies of this booklet may be obtained from Haynes Stellite Sales Offices located in Chicago, Cleveland, Detroit, Houston, Los Angeles, New York, San Francisco and Tulsa, or from the General Office and Works at Kokomo, Ind., or Foreign Sales Department, New York City. Information on Haynes Stellite Products also is available through the 42 apparatus shipping points of The Linde Air Products Company.

HAYSTELLITE TRADE MARK

The Cast Tungsten Carbide diamond substitute

HAYNES STELLITE COMPANY

Unit of Union Carbide and Carbon Corporation

NRA CODE

UCC

1914 - 1934 — Twenty Years of Progress

Personnel Change in Oklahoma Department

Oklahoma City—Announcement was made on Wednesday, December 19, of the discharge of E. G. Dahlgren, chief clerk of the proration department following a conference between Commissioners Reford Bond and Jack Walton. Dahlgren has served the proration department for more than four years, has been responsible for most of the excellent statistical data released by the department and has been very popular with oil men who have contacted him in regard to proration matters. The action came during the absence of E. R. Hughes, chairman of the commission, and W. J. Armstrong, proration umpire, both of whom were in Washington during the early part of the past week. Dahlgren is to be succeeded by Thos. W. Collins on January 10, 1935.

Shawnee Pool

Shawnee, Okla.—Three tests were nearing the objective horizon during the week in the new Shawnee pool northeast of the city limits here. Phillips Petroleum Company's Grove 1, C SE NE SE 5-10n-4e, four locations south and one east of the discovery well, topped Earlsboro sand at 4482 feet and cored to 4570 feet with a good showing of oil. The same company's Windall 1, C NW SW NE 8-10n-4e, slightly over a mile southwest of the discovery well had dry sand, apparently Earlsboro, at 4482 feet and was coring ahead with nothing showing. Stanolind Oil & Gas Company et al's Sauter 1, C NE NE SE, 31-11n-4e, over a mile to the northwest of the discovery well, topped Viola lime at 5373 feet and was coring below 5421 feet.

Osage County

Ponca City, Okla.—Empire Oil & Refining Company has staked location for Osage 1, C NE SW NW 2-25n-3e, two locations east of the discovery well in a recently opened and unnamed pool five and one-half miles southeast of here in western Osage County. Empire et al's Hardy 1, C NE SE NE 3-25n-3e, the discovery well, was completed in Spteember of this year for 75 barrels of oil and 50 barrels of water from Layton sand at 2570 to 2638 feet. It was drilled to Hominy sand at 3810 to 3824 feet, plugged back to 2700 feet and shot with 70 quarts at 2570 to 2640 feet. It appears to be an edge well on the west side of the pool.

Now Available to the Oil Industry!

A REPORT ON THE PETROLEUM INDUSTRY OF THE UNITED STATES

By STANLEY GILL

A limited edition of this comprehensive study on the curtailment and conservation problem, prepared as a special report for the Cole subcommittee on Petroleum Investigation, has been made available by the author at $10.00 a copy.

ORDER YOUR COPY NOW

Address

GULF PUBLISHING COMPANY

P. O. Box 2811 Houston, Texas

Oklahoma Proration Increases Allotted

Oklahoma City.—In an order issued on December 18 by the Oklahoma Proration Department, allowable percentages were increased in all of the prorated pools of the state to take in a 37,500 barrels daily increase granted by federal authority for the last two weeks of December. This method of allocating increases will come up for approval of the corporation commission at a hearing on Friday, December 28. Increases range from one-half of one percent in the Wilcox sand zone of the Oklahoma City pool, Sasakwa Townsite, Crescent, Lucien and Keokuk Falls, to four percent in the West Asher pool. Corrected allowable sheets on all pools were expected to be mailed at the end of the week.

Offset to Binger Test Starts Drilling

Tulsa.—New work was on a slight increase during the week in Oklahoma when scouts made 42 first reports compared to 37 for the preceding week. Activity in the Fitts pool placed Pontotoc County in the lead with seven new operations, Osage and Stephens Counties were close behind with five each; Creek and Seminole Counties had four each; Muskogee County, three; Hughes, Jefferson, and Pottawatomie Counties, two each; and Bryan, Caddo, Carter, McIntosh, Murray, Noble, Oklahoma and Pawnee Counties, one each.

One of the most interesting of the new operations is Denver Producing & Refining Company's Sah-Cam 1, C SE SE 33-10n-10w, in the center of the 40-acre tract directly west of the famous "Binger test" which is now fishing at 11,230 feet, the second deepest test in the world. This test will be drilled by direct current motors drivin from alternating current, will use one of the heaviest types of rotary draw works and a 157-foot by 26-foot tubular steel derrick. Operators plan on using four-inch drill pipe and setting 9⅝-inch casing at approximately 8000 feet. It will test the horizon from which the deep test is now producing by heads at about 9900 feet.

From a total of 85,230 feet of drilling, including 408 feet in one old well, operators obtained 20 oil wells with combined initial production of 11,003 barrels, one dry gas well with initial volume of 250,000 cubic feet, and 12 dry holes. The reports shown below also include one repressure well in Osage County, three abandoned locations and one test spudded and abandoned:

Company, Well and Location	Init. Prod. Bbls.	Depth
ATOKA COUNTY—		
W. L. Lockhart, A. P. Miller 1, se se nw 9-1s-14e	lcn.	abd.
CARTER COUNTY—		
Fred Shores, Ratliff Spears 2, se nw se ne 29-1s-2w	spd.	abd.
Skelly Oil Co., Moore 3, se se nw 17-2s-2w	149	2567
CLEVELAND COUNTY—		
Mid-Continent Petroleum Corp., Collett 1, ce½ ne sw 35-10n-1w	*	6952
COMANCHE COUNTY—		
Ashcraft & Palmer, Pope 6, nw ne nw sw 28-2n-10w	*	946
CREEK COUNTY—		
Oscar Anderson, Hillis 1, ne ne se ne 6-18n-8e	*	2859
Magnolia Petroleum Co., Street 9, nw nw sw ne 3-17n-8e	25	1370
Culbertson et al, Thomas 2, csl ne se 10-16n-10e	*	905
Hoover Brothers et al, Ralston 1-A, cnl n½ se 9-16n-10e	*	2813
JEFFERSON COUNTY—		
Bridwell Oil Co., Wohlemuth 4, nw ne sw nw 30-6s-5w	60	1507
LINCOLN COUNTY—		
Slick-Urschel, Kentzelman 7, nw nw sw 7-14n-4e	*	4895
Mid-Continent Petroleum Corp., Wagner 1, nw sw nw 10-13n-6e	778	4290
LOGAN COUNTY—		
Eason Oil Co., Herren 1, cn½ ne ne 4-16n-4w	524	6290
MARSHALL COUNTY—		
R. A. Godfrey, Burge 7, nw nw se se 25-7s-5e	4	549
MUSKOGEE COUNTY—		
Metzger, Daniel 2, sw sw se sw 8-15n-17e	10	1270
J. A. Jones et al, Spaulding 1-A, ne ne nw se 34-15n-18e	50	997
OKFUSKEE COUNTY—		
Prince & Anderson, Grayson 2, sw nw sw se 23-11n-11e	*	2046
OKMULGEE COUNTY—		
A. W. Cline, Perryman 1-A, se ne se se 14-15n-14e	2	875
R. Ford, McIntosh 1-A, cnl sw se 10-13n-14e	*	1190
Lindy, Goodin 4, nw nw sw se 28-12n-14e	¶¼	627
OSAGE COUNTY—		
The Texas Co., L. Kohpey 4, ce½ sw se se 29-25n-8e	14	2478
Phillips Petroleum Co. 16, nw se ne se 31-24n-12e	..	....
Norbla Oil Co. & Sinclair Prairie Oil Co. 2, se sw sw nw 11-24n-7e	*	895
E. O. Platter 4, se se ne nw 30-22n-9e	8	505
PAWNEE COUNTY—		
Roy Dean et al, Mullendore 1-A, ne ne nw nw 31-21n-9e	*	2387
PONTOTOC COUNTY—		
Mayfield, Davis 1, sw sw sw 19-5n-5e	100	2569
Boetcher, Alexander 1, ce¼ w½ 24-4n-7e (owdd)	100	1708
Moore et al, Smith 1, nw nw nw 31-2n-7e	1872	4262
Magnolia Petroleum Co., Harden 2, se ne nw 30-2n-7e	6720	4345
POTTAWATOMIE COUNTY—		
Phillips Petroleum Co., Osborne 1, nw se ne 5-10n-4e	276	4456
Magnolia Petroleum Co., Disch 2, se se se 12-7n-4e	48	3911
W. Clark, Jordan 1-A, sw se se 10-7n-4e	93	3853
SEMINOLE COUNTY—		
Mudge Oil Co., Fleet 1-A, nw sw ne 11-6n-7e	*	1498
Winona Oil Co., Myers 3, nw sw ne 31-7n-8e	lcn.	abd.
Champlin Refining Co., Wolf 4, nw nw nw 32-7n-8e	lcn.	abd.
The Texas Co., W. E. Mayhue 6, se se ne 14-9n-6e	150	4026
S. Carliner 2, sw nw se 27-8n-8e	20	4199
STEPHENS COUNTY—		
Lewis Sykes, Gardis 1, ne ne sw 21-1s-8w	*	2490

*Failures; †Junked; ¶Million cu. ft. gas.

Second Producer in Lincoln County Pool

Chandler, Okla.—The Gessman pool, approximately 3½ miles south of here in south central Lincoln County received its second producer when The Texas Company completed Hoover 1, NE NE SE 33-14n-4e, producing 380 barrels the first 24 hours, 380 barrels the second 24 hours and 395 barrels the third from Cleveland sand topped at 3050 feet and drilled to 3057 feet, the total depth. It is a south offset to the discovery well which was completed in a very unusual manner several months ago. It was not known at the time of completion of the discovery well just what formation production was from but it is now determined to be Cleveland sand.

Lincoln County seemed due for another new pool late in the week when Sinclair Prairie Oil Company's Hoyt 1, NW SW NE 5-14n-3e, seven miles west of here and 3¼ miles west of production in the wetsern part of the county, topped Simpson dense at 5000 feet, the dolomite at 5017 and encountered a good showing of oil and a small showing of gas from 5043 to 5045 feet in sandy dolomite. It was drilling below 5055 feet.

Kay County Well Flowing by Heads

Newkirk, Okla.—Bay Oil Corporation's Hudson 1, SW SW SE 14-28n-3e, discovery well 4½ miles east of here and three miles north of production in the Mervine pool in eastern Kay County, was flowing by heads at the rate of 125 to 155 barrels per day early in the week. Later in the week it made 60 barrels in eight hours flowing through a bradenhead between the 6⅝- and 5 3/16-inch strings. The sand logged at 2960 to 2900 feet was first called Skinner, then Bartlesville and now is reported to be either Skinner or Prue. The Texas Company, Shell Petroleum Corporation and Skelly Oil Company are the only large companies owning nearby acreage.

Verbeck, Kansas.—Indications late in the week were that Kansas would have a new oil pool within the next few days when Darby Petroleum Corporation's Jarus 1, NW SW NE 16-16s-12w, started filling with oil at the rate of slightly better than 100 feet per hour from siliceous lime topped at 3348 feet. This test is located three miles east of here and five miles southeast of the Sellens pool in northeastern Barton County.

Kansas Has Week of Successful Completions

Wichita, Kansas.—Kansas operators enjoyed an unusually successful week when 18 of the 20 completions were oil wells with combined initial of 12,817 barrels. The 20 completions involved 55,493 feet of drilling including 1139 feet in two old wells. Reno County led in new production with 8231 barrels from three wells in the Burrton-Haury pool, Russell County, was second with 1604 barrels from one well and Rice County was third with 1104 barrels from three wells.

New work declined almost 40 percent as McPherson and Russell Counties led the state with three first reports each; Butler, Reno, Rice and Sedgwick Counties, had two each; and Stafford and Woodson Counties, one each, a total of 16 compared to 26 for the preceeding week.

Completion reports are shown below:

Company, Well and Location	Init. Prod. Bbls.	Depth
BUTLER COUNTY—		
Vickers Petroleum Co., McCraner 1, cwl sw sw 36-24s-3e	199½	2730
Cromwell, Stern 6, cnw se ne 33-27s-6e	65	3087
CHASE COUNTY—		
Paulhamus, C. O. Leedy 1, se sw nw 25-22s-9e (owdd)	100	2418
ELLSWORTH COUNTY—		
Magnolia Petroleum Co., Andrea 3, sw nw sw 7-17s-10w	98	3198
GREENWOOD COUNTY—		
Cooper, Errickson 2, sw se sw 17-24s-13e	20	1606
HARVEY COUNTY—		
Mabee Oil Co., Mickel 2-B, nw sw sw 8-22s-3w	107	3565
Marathon Oil Co., Klassen 4, ne se nw 30-22s-3w	816	3225
McPHERSON COUNTY—		
Miller et al, Flook 5, ne ne nw 1-20s-2w	*	3412
Marathon Oil Co., Bridgens 3, sw ne sw 2-20s-3w	58	3050
RENO COUNTY—		
Tidal Oil Co., Mantford 1, nw nw sw 12-23s-4w	1180	3622
Olson Oil Co., Downie 2, sw se ne 14-23s-4w	6016	3607
Olson Oil Co., Garvin 2, cnw se 35-23s-4w (owdd)	1035	3320
RICE COUNTY—		
Shell Petroleum Corp. et al, Plogg 2, cel se 33-18s-9w	285	3272
The Texas Co., E. West 7, nw sw nw 21-20s-10w	522	3330
Empire Oil & Refining Co., Specht 1, ne ne ne 20-20s-10w	297	3346
RUSSELL COUNTY—		
Aylward Co., Killion 1, se se ne 28-13s-14w	1604	3278
SEDGWICK COUNTY—		
Shawver, Russell 4, ne se se 17-28s-1e	355	3117
STAFFORD COUNTY—		
Empire Oil & Refining Co., Shilling 1, cnw sw 26-21s-13w	*	3755
WOODSON COUNTY—		
Albor Oil Co., Figgs 2, se nw sw 27-23s-14e	35	1650
Sheedy, Lodge 1, nw ne ne 28-25s-15e	25	1504

*Failures; †Junked; ¶Million cu. ft. gas.

Duncan Extension Has Gas Blowout

Duncan, Okla.—A discovery which may be of importance to the southern portion of the state was made early in the week when Angle & Brogden's Johnson 1, NE NE SE 17-1n-8w, six miles northeast of here and slightly over a mile north of production in the north Duncan pool, blew out of control and was estimated running wild at the rate of 40,000,000 to 50,000,000 cubic feet of gas per day. Sands had been drilled between 2225 and 2483 feet, 264 feet of liner set and operators were attempting to run tubing when the blowout occurred. The well is only a short distance from the old Lawton-Duncan highway which has been blocked off as a safety measure. The area is limited to the west, north and south by dry holes which have penetrated greater depths than that of the producing horizon.

Ada, Okla.—Moore et al announced location for Akers 2, SE NW NE 36-2n-6e, in the southern portion of the Fitts pool and known to be directly over a faulty plane. This will be watched with more than usual care.

East Texas Extended In Two Directions

Tyler, Texas.—Two important extensions to the productive limits of the west and north flanks of the East Texas field were attained last week by independents venturing out into doubtful territory.

John Lane Drilling Company's A. T. Tyiska 1, SEc of 50-acre lease, R. Wilson Survey, Smith County, provided the biggest surprise in registering a steady flow of 90 to 100 barrels of oil per hour through open tubing from less than two feet of sand taken in coring to 3832 feet, or about 3321 feet below sea level. It is about 2600 feet west and 3400 feet north of nearest production. Magnolia Petroleum Company is starting a south offset with its A. T. Tyiska 2, NEc of 116.94-acre lease.

F. S. Lenhart, Gladewater, et al's H. B. Owens 1, near southwest corner of 50-acre lease, Wm. King Survey, Upshur County, advanced production about 2000 feet north of its particular sector, in developing a flowing well from sand with shale streaks at 3780-3788 feet. It has a sub sea depth of 3311 feet. Production was estimated at 75 barrels per hour through two-inch lead line off 5 3/16-inch casing set at 3748 feet, with 70 pounds working pressure. This well was spudded November 23, and was drilled in with cable tools. L. V. Boggess and F. M. Kendrick are credited with having an interest in the property. Sun Oil Company holds leases on several tracts to the east and north.

Six New East Texas Wells Fail to Flow

Tyler, Texas.—The East Texas field added 68 oil producers and a junked hole during the past week. Six of the new wells failed to register a natural flow upon completion, and eight additional tests are erecting standard rigs, else installing star machines, to complete because of being situated in low reservoir pressure areas along the east flank of the structure.

Substitution of cable tools for rotary rigs in completing wells is steadily gaining in popularity with operators holding leases where sand conditions are poor, and bottom-hole pressure is inadequate to resist flooding of the sand with rotary drilling fluid. It is quite possible that this practice will gradually become general, as new completions in the most prolific sections of the field frequently require a full-day of swabbing to kickoff. This inconvenience and extra expense can be lessened, however, by speeding up the act of drilling in the well so as to shorten the period that the porous oil sand is exposed to the weight of the rotary drilling fluid.

Two wells in the north sector were completed as pumpers. United East & West Oil Company's C. T. Shelton 1, SEc of 56-acre lease, Wm. King Survey, Upshur County, proved up additional territory in pumping 30 barrels of oil in four hours from sand at 3707-3710 feet. The hole has a sub sea depth of 3325 feet. In the extreme north section, Roger Lacy et al's Ray 1, four-acre lease, C. H. Cooper Survey, pumped 30 barrels fluid, five percent bs&w, in eight hours from sand at 3613-3624 feet. It was drilled to 3351 feet below sea level.

Standard tools were used in completing Wainwright West Oils, Ltd.'s J. M. Martin 2, situated on 10.32-acre lease, Jacob Taylor Survey, west edge of production in Gregg County, from a depth of 3731 feet, or 3322 feet below sea level. Due to its close proximity to the water level, only about one-foot of sand was taken in. The well swabbed at rate of 60 barrels hourly. Stanolind Oil & Gas Company and Simms Oil Company's A. W. Miller 2, situated on the west bank of the Sabine River and 265 feet southeast of Miller 1, NEc of 100¼-acre lease, St. L. Davis Survey, flowed at rate of 80 barrels of oil per hour from sand at 3554-3565 feet.

Flowing production was developed by Harry S. Moss et al's Fannie Marshall 10, located on 38.93-acre lease near the east edge of the Kilgore area, after shooting hard broken sand pay with 35 quarts of nitro at 3511-3539 feet. The well is credited with flowing 20 barrels hourly by heads. Marshall 6 is also a recent completion on this lease, and it flowed 100 barrels hourly, having been drilled in with star machine. Overton Refining Company's R. Jones 1, an east edge well in the Daniel Clark Survey, northern Rusk County, flowed 20 barrels hourly by heads at 3682 feet.

The Joiner area accounted for three wells that established initial gauges by swabbing. Marathon Oil Company's Henry Clay 13, M. V. Pena Survey, swabbed 20 barrels hourly at 3605 feet. Carter et al's W. H. Frederick 2 and Hamilton Petroleum Company and Jenkins Oil Corporation's Wm. Jobe 23 were likewise completed.

J. D. Nantz et al's Coolidge 1, northern Rusk County, has skidded rig after experiencing a junked hole at 3055 feet.

Humble Oil & Refining Company's Herman Castleberry 9, located near east edge of 244½-acre lease, B. N. Hampton Survey, Gregg County, apparently missed the sand in logging Georgetown lime at 3505-3515 feet. It was dry on drill stem test, and will probably be abandoned. Red Irion Drilling Company's Adams 1, also an east side location in the Longview section of Gregg County, drilled into shale at 3500 feet. It was credited with having swabbed 32 barrels of oil in three hours while trying to complete.

Five wells in process of completion in the Kilgore area, are awaiting installation of cable tools. These include: Bowles Oil Company's Dick Wells 12, Eugene Constantin et al's Mayfield 6, and Yandell Rogers et al's Henry Sexton-Humble 1, all in Rusk County, and Trentman et al's Presbyterian Church 1, and H. W. Snowden et al's Vantel 1. H. B. & W. Oil Company's Ras Redwine 5, Joiner area, is awaiting standard rig to pump after drilling broken sand at 3553-76 feet.

Detailed list of completions in East Texas field during the past week follows:

Company, Well and Location	Init. Prod. Bbls.	Depth
Joiner Area—		
Atlantic, H. L. Griffin 8 (80-ac)	5800	3660
E. V. Ball et al, H. Brooks 1 (1-ac)	4500	3700
J. M. Bonner & J. F. Merrick, Jackson 1	5400	3781
Carter et al, Frederick 2	250	3580
W. H. Gant-Garvin & Wegener, W. P. Moore 14 (134.24-ac)	3000	3597
Gulf, Elinora Cole 4 (37-ac)	8000	3808
Hamilton Pet. Co.-Jenkins Oil Corp., Wm. Jobe 23 (109-ac)	800	3620
Humble, A. D. Blackwell 38 (325.79-ac)	8600	3645
Heywood White 14-B (132.96-ac)	4000	3721
I. W. Wooley 22 (201.53-ac)	9000	3709
Marathon, H. Clay 13 (130.46-ac)	480	3605
M. C. DeGuerin 14 (160.7-ac)	4500	3680
D. Ledbetter 16 (212.48-ac)	3000	3661
J. F. Mason 13 (103.86-ac)	7200	3673
Geo. B. Ray Corp., E. S. Thrash 5 (3½-ac)	10,000	3814
Yandell Rogers et al, Town Heirs 2	1500	3803
Sun, A. V. Ritch 7-A (99-ac)	4200	3690
Texas Co., A. S. Jarvis 13-A (161½-ac)	7000	3617

Company, Well and Location	Init. Prod. Bbls.	Depth
Kilgore Area—		
Bay Oil Corp. et al, W. P. Moore 9 (106.63-ac)	10,000	3776
Cal-Tex Corp., L. D. Crim 10 (50.65-ac)	12,000	3577
Gulf, C. Brown 31 (263.52-ac)	5800	3548
Humble, L. D. Crim 141 (914.51-ac)	9000	3592
L. D. Crim 148 (914.51-ac	9500	3710
L. D. Crim 154 (914.51-ac)	9600	3598
L. D. Crim 155 (914.51-ac)	9000	3612
Invincible Oil Co., Francis 1	10,000	3655
Magnolia, Alonzo Hicks 22 (99-ac)	9200	3660
McAlester Fuel Co., Sabine 1-N, Tr. No. 7	7400	3522
McCullough Oil Co., J. A. Knowles 3 (8-ac)	5800	3581
Harry S. Moss et al, F. Marshall 6 (38.93-ac)	7500	3546
F. Marshall 10 (38.93-ac)	500	3539
J. D. Nantz et al, Coolidge 1	†	3055
Overton Ref. Co., R. Jones 1	500	3682
A. D. Robinson et al, J. S. Elder 2 (7-ac)	9000	3550
Shell, H. T. Neal 8 (40.7-ac)	7300	3581
Williams-Bonner 8 (36-ac)	8800	3628
Sultana Oil Corp., Sabine River 2-D, Tr. No. 6 (6.41-ac)	10,300	3552
Texas Co., H. T. Elder & Son 22 (86-ac)	5600	3657
Tide Water, E. R. D. Bivens 23 (200-ac)	8500	3642
Wainwright-West Oils, Ltd., J. M. Martin 2 (10.32-ac)	1000	3731
Longview Area—		
Atlantic, E. Burnside 29-A (204-ac)	11,500	3550
J. B. Bond & H. P. McGaughey, Wm. Cobb 3 (7.76-ac)	12,000	3576
Cal. Pet. Corp. (Ven), A. J. Deering 8 (60-ac)	5400	3679
Ed. B. Cox & Jake L. Hamon, L. A. Rodden 16 (110-ac)	10,000	3589
Eastern Texas Pet. Co., H. G. Ray 4-A (35-ac)	3600	3611
M. E. Gaskill et al, S. J. Kay 4 (25-ac)	9300	3667
S. A. Guiberson, Jr., et al, J. Hopkins 3 (8-ac)	9100	3538
Gulf, T. H. Bozeman 13 (111-ac)	6500	3618
M. O. sheppard 34 (386-ac)	7000	3510
M. O. Sheppard 36 (386-ac)	7500	3512
J. C. Hawkins et al, Shiloh School 3 (3-ac)	8700	3672
Humble, J. H. Sheppard 7-A (57.54-ac)	6500	3629
Dollie Bell Key et al, H. Key 2 (4.51-ac)	9000	3550
Roger Lacy et al, Ray 2 (4-ac)	90	3624
Lucey Pet. Co., McBee-Fisher 11 (58.57-ac)	9400	3534
Magnolia Pet. Co., Jim Allen 8 (34.41-ac)	9500	3692
E. J. Moran et al, C. J. Dollahite 2 (10-ac)	8500	3683
B. F. Phillips et al, L. P. League 6-B (24-ac)	5500	3604
Selby O&G Co.-Lewis Prod. Co., Snavely 20-A (214-ac)	6200	3575
Shell, S. C. Fishburn 11 (100-ac)	6500	3552
H. Hampton 17 (169-ac)	8800	3670
Sun, J. C. Gray 11 (101½-ac)	1000	3622
Sun & Texas Seaboard, J. Rollins 13 (87-ac)	8000	3554
Tide Water, W. E. Jones 11 (80-ac)	9300	3652
United East & West Oil Co., C. T. Shelton 1 (56-ac)	180	3710
Yount-Lee, S. G. Smith 8-A (60-ac)	9000	3567
Julia Snoddy 7-B (51-ac)	9200	3603
Stanolind-Simms Oil Co., A. W. Miller 2 (100¼-ac)	7600	3565
A. J. Tuttle 10 (95.8-ac)	9000	3562

MISCELLANEOUS COMPLETIONS

ANDERSON COUNTY (Cayuga Field)—

Trinity State Oil Co., Trinity River 1	5000	4016

WILDCAT COMPLETIONS

CHEROKEE COUNTY—

H. L. Parsons & J. B. Daniels, Southern Pine 1	†	2443

HUNT COUNTY—

Dilworth Hager, J. S. Abercrombie & Harrison W. A. Morrison 1	*	3211

*Failures; †Junked; ¶Million cu. ft. gas.

210 Drilling Permits Are Issued in Texas

Austin, Texas.—The Texas Railroad Commission has granted permits for the drilling of 210 wells in Texas during the past week, about the average number that have been granted weekly for the past three months.

In East Texas 67 new wells were allowed. Rusk County took the lead with 33 wells, Gregg County operators were allowed 24, and there were 10 in Smith County. None were reported in Upshur County.

North Texas was a close second with 50 wells allowed, of which there were 19 in Archer County, 15 in Wichita and 10 in Young County.

Southwest Texas listed 33 new wells scattered over a wide area, and there were 26 in the Gulf Coast District, with nine in Harris County, most of which were for new wells in the Tomball field.

West Texas added 14 new permits, and the Panhandle area to the north dropped to seven.

Because of the open weather throughout the state, the number of permits applied for has remained normal, although there is usually a decline at this time of the year.

Proration Boost Helps North Texas Work

Wichita Falls, Texas.—Granting 2,000 barrels increase in the proration allowable of North Texas by the Texas Railroad Commission effective December 18 will have a stimulating influence upon new development work. The district is allowed to produce 58,500 barrels daily under the new quota, thus providing an ample surplus above that portion of the allowable used up by marginal wells to lessen the production restrictions on prorated wells. Indications are that a market will be available for the added production, as independent refiners in the district are endeavoring to increase their crude charges to stills, while major buyers promise to boost their crude runs after the first of the year.

Prorated wells, consisting of a minority group that have a greater potential output than the marginal well quota, have been prorated to 10 percent of their potential since December 1. The added allowable for the district will probably make it possible to produce prorated wells between 15 and 20 percent of their potential after deducting the minimum quota fixed by the state's marginal well law.

The district accounted for 38 completions during the past week, but dry holes outnumbered the producers. There were 18 pumping wells with a combined initial yield of 1,179 barrels. A heavy toll of failures was exacted in Archer, Wichita and Young Counties.

Operations have been temporarily halted on W. B. Hamilton et al's D. C. Giddings 2, Archer County deep test, to cement a string of 5 3/16-inch pipe to cut off water showing with 1000 feet of oil in hole at 5164 feet. This project is located two miles north of Anarene, and has been showing for a producer in sandy-lime formation topped at 5147 feet one month previous. It was drilled to its present depth with open hole below 4741 feet, where seven-inch pipe was cemented.

Completions in North Texas during the past week follow:

Company, Well and Location	Init. Prod. Bbls.	Depth
ARCHER COUNTY—		
C. L. Abercrombie et al, Abercrombie-Taylor 1-A, blk 40	*	1507
L. T. Burns et al, H. Forrester 1, blk 46	*	1455
F. P. Cullum et al, Falls County 16, blk 10	60	1154
Fain-McGaha Oil Corp., C. S. Arnold 29	300	1217
E. R. Fain 4-A, blk 3	9	675
Fain-McGaha & Humble, Logan 46	75	1140
Luther Hedrick et al, G. R. Lemmond 1	*	787
Kimmer & Woofter, L. Webb 1, blk 27	*	733
C. Newburn et al, John Dormier 1, sec 1	*	1738
Perkins & Cullum, Falls 120, blk 13	40	1109
P. S. Rawdon et al, J. H. Robertson 1	*	685
White & Duncan, B. C. Andrews 1	35	911
L. A. Wilkins et al, J. S. Bridwell 1	*	922
JACK COUNTY—		
Brownfield Dev. Co., W. L. Shields 2	*	922
R. H. Gable et al, E. F. Smith 1	45	2360
Mack Thomas & Reed, E. Myers 1, sec 2	*	603
J. M. Scott et al, J. M. Martin 1, sec 3328	*	1002
MONTAGUE COUNTY—		
Texas Co., F. M. O'Neal 2	325	1715
WICHITA COUNTY—		
W. H. Bohner et al, First Nat'l Bank 14, sec 26	18	1647
L. T. Burns & Long, First Nat'l Bank 15-D, sec 26	10	470
First Nat'l Bank 16-D, sec 26	3	226
Golding & Cochran, Waggoner 4-D, blk 10	*	1876
Waggoner 3-H, blk 9	50	1525
J. E. Jones et al, R. L. Lamb 7	1	144
J. E. Keller et al, W. T. McKinney 1, blk 22	*	809
Pet. Producers Co., First Nat'l Bank 59, sec 28	5	468
First Nat'l Bank 60, sec 28	*	468
First Nat'l Bank 61, sec 26	*	478
Texas Co., First Nat'l Bank 14, sec 26	18	1646
S. H. Walton et al, Granger 2, sec 1	*	866
WILBARGER COUNTY—		
J. E. Dunaway et al, Waggoner 4, sec 40	25	1220
Luther Webb et al, Waggoner 9-E, sec 22	100	1893
YOUNG COUNTY—		
T. Abernathy et al, J. W. Knox 1	*	796
W. E. Bernhard et al, Belknap Coal Co. 1, sec 11	*	525
B. N. Honea et al, Fee 9, sec 1492	*	946
J. J. Moran et al, J. P. Atchley 4, sec 226	*	1003
Wainwright & Keith, W. G. Mobley 1, sec 1936	*	695
Frank Wood et al, Cooper-Seibold 1, sec 81	50	1214

*Failures; †Junked; ¶Million cu. ft. gas.

New Pool Opened In Pecos County

San Angelo, Texas.—Opening of a new oil pool in Pecos County and on a line between the Yates and Taylor-Link fields resulted from the third wildcat drilled by Gulf Production Company on the White & Baker ranch. Flowing production averaging 25 barrels daily was developed early last week by the company's White & Baker 3, SEc N½ Section 4, Block 207, T. C. Ry. survey, about seven miles east of the Taylor-Link field, from brown sandy-lime at 1823-1826 feet. This rate of flow was made through cavings and while reaming hole to lower seven-inch pipe to 1750 feet to try for a completion at the present depth. The oil tests 31 gravity. Top of the Delaware lime marker was reported at 1335 feet, with an elevation of 2780 feet, or about level with Humble Oil & Refining Company's White & Baker 2, which was drilled about two miles to the south and completed last September at 2213 feet as a failure in unsuccessful attempt to perpetuate a block of leases. The California Company holds the south offset to the producer, which is also about 2½ miles northwest of Humble Oil & Refining Company's White & Baker 1, abandoned as a failure in Ordovician lime at 9811 feet.

Heavy mud and weighting material used in drilling in the two offset wells to the discovery producer of the Sayre field, Winkler County, is credited with being responsible for the disappointing showing made by both. Mid-Continent Petroleum Corporation's Howe 1, SWc S½ NW¼ Section 12, Block B-26, north offset to the producer, flowed by heads at intervals after drilling to 2894 feet. An effort is being made to wash the hole. Sinclair Prairie Oil Company's Cummins 1, a west offset to the above, was also drilled in with rotary, and has produced only gas in deepening at intervals from 2887 to 2942 feet. Magnolia Petroleum Company's J. B. Walton 4, reported last wek as being completed for the second and largest producer in the area, was given a pipe line connection December 16 by Magnolia Pipe Line Company's two mile four-inch carrier.

Fox and Butler's Brown-Altman 1, NEc N½ SW¼ Section 6, Block B-5, situated south of the Sayre area and east of the Hendrick field, has progressed to the 2800-foot level, using cable tools with the hole loaded. The owners report that no oil showings have appeared with the gas production topped at 2575 feet. Joe C. Maxwell et al's Oscar Clapp 1, a nearby wildcat, is preparing to cement casing at about 2670 feet. In the southern part of Winkler County, Sid Richardson et al's M. J. Hill 1, SWc SE¼ Section 18, Block B-11, was drilling in hard lime at 3720 feet, carrying hole full of sulphur water with some oil from upper section of the lime. Richardson has announced that drilling will be halted near the 3800-foot level.

Lou Stogner, Amarillo, and associates have made location for J. W. Richards-McWhorter 1, C SE NE Section 4, Block A-37, P. SL. Survey, to drill a 5000-foot test on a small block in northwestern Andrews County. Major companies and a few independent concerns holding short term leases in the immediate area supported this project. The A. E. Service Drilling and Royalties Corporation has taken the drilling contract for a cash fee, plus a one-fourth interest in the 160-acre drilling site. Negotiations were completed last week for another West Texas wildcat to be drilled in eastern Howard County by Stacy B. Dorn et al on a 2600-acre block about four miles northwest of the Denman field. Location has been made on the C. B. Read tract, NEc S½SW¼ Section 41, Block 30, T&P Ry. Survey, T-1-N. Joe Mixon et al's Capps-Lucas 1, located about 5½ miles northwest of the Denman field, was drilling below 2900 feet towards the close of the week, and is scheduled to continue to the Westbrook lime should the Denman pay zone prove dry.

An early verdict on three of the group of wildcats seeking production in the Ordovician lime is due shortly. In the Skelly-Utah pool, Reagan County, Skelly Oil Company et al's University 1-D is checking low on structure, and developed a twist off at 9120 feet. It has not reached the Ordovician section, according to reports. The Glasscock County deep test of John I. Moore, Loffland Brothers et al's L. S. McDowell 1 was reported in black shale at 8040 feet. Humble Oil & Refining Company's Honig 1, Schleicher County wildcat, was coring lime formation below 6320 feet. Lime formation topped at 6248 feet has been tentatively identified by some geologists as being a member of the Ordovician. It has an elevation of 2276 feet. John M. Cooper et al's Bert Page 1, Schleicher County, is preparing to run tubing with packer to shut off upper water to make a production test of oil saturated lime logged at 5922 and 5932 feet. Drilling was halted at 5973 feet. This test has not penetrated the Ordovician series, according to reports.

Grand Falls Producing Leases Are Purchased

San Angelo, Texas.—Prince Brothers Drilling Company, Electra, Texas, has enlarged its holdings in the Grand Falls district, Ward County, through the purchase of two 40-acre leases, with one well on each, from Penn Oil Company, Dallas, for a consideration of $50,000. This deal involves the Hordage-Wilson lease, consisting of the E¼ of E¼ Section 11, and the J. F. York lease, embracing the E¼ of W¼ Section 10, both in Block 34, H&TC Ry. Survey. The California Company holds a 1/16-overriding royalty interest in both. The new owners are starting additional tests on the York lease.

Owen M. Murray, Dallas, and associates have contracted for the purchase of A. J. Frazier and Ungren's two producing 80-acre leases, embracing the southwest quarter of Section 2, Block 30, T&P Ry. Survey, T-1-S, Denman field, Howard County, with two completed wells. This deal has been pending for more than a month, and was then reported to involve a consideration of $90,000 payable in cash and from production, but a third test has since been drilled to the top of the lime pay zone. Murray and associates are also substantial stockholders in the Herschbach Petroleum Corporation, successor to the Illinois Oil Company, which owns lease on the three tracts comprising the north one-half of Section 2. Herschbach Petroleum Corporation's Davis 2-B, SWc E½ NW¼ Section 2, is credited with having produced 612½ barrels of oil during first 24 hours after shooting broken lime pay with 680 quarts of nitro at a total depth of 2800 feet.

North Texas Stocks at Lowest Level in Decade

Wichita Falls, Texas.—Crude stocks in the North and West Central Texas districts were withdrawn at a heavy rate during November and the Texas Panhandle district was credited with its fourth consecutive monthly reduction during the same period. The former district is rapidly ceasing to be an important storage oil center, having been pulled upon at an average rate of 22,000 barrels daily during November. Stocks on hand at the close of the month were estimated at 8,440,000 barrels, or the lowest level reached in more than a decade, according to reports.

Panhandle stocks on December 1 were estimated at 13,999,975 barrels, having declined about 93,000 barrels during November, or a total of 810,000 barrels within the past four months.

Scarborough Edge Test Fails at Advanced Depth

San Angelo, Texas.—An aggregate of 5960 barrels of oil and 42,250,000 cubic feet of gas production was added by West Texas counties during the past week by the completion of 14 oil wells and one gasser. There were three dry holes completed during this period. The failures were confined to wildcat and semi-wildcat tests in Jones County.

Sid Richardson et al's W. F. Scarborough 4-F, situated on the southwest edge of the Scarborough field, Winkler County, has been completed and shutin as a 40,000,000 cubic foot gasser after drilling below the regular oil horizon for the area. It has a total depth of 3325 feet, or 411 feet below sea level. An abrupt break in the structure is believed responsible for this well having failed to yield oil, as it is one location west of Scarborough 3-F, which registered an initial flow of 650 barrels daily from sandy lime at 2815-3020 feet.

Detailed list of completions in West Texas during past week follows:

Company, Well and Location	Init. Prod. Bbls.	Depth
ANDREWS COUNTY—		
Humble, B. S. Walker 1	¶1-50	4538
ECTOR COUNTY—		
Gulf, W. E. Connell 5-B	550	3700
Stanolind, J. M. Cowden 11	1270	4300
GLASSCOCK COUNTY—		
Continental-Group 1 Oil Corp., Settles 13	905	2400
Simms, L. S. McDowell 1-A	15	2316
HOWARD COUNTY—		
Herschbach Pet. Corp., Davis 2-B	610	2800
R. J. Wallace et al, A. M. Bell 2	55	2850
JONES COUNTY—		
Hammer & Beams, Mrs. R. R. Shapard 1	*	2002
Nugent Oil Co., A. Wilson 1	*	1977
Ray & Staniforth, W. F. Stewart 1	*	1959
PECOS COUNTY (Yates Field)—		
California Co., M. A. Smith 7, Lse. 1	20	1424
Cardinal Oil Co., Tippett-Kirby 25-E	195	488
TAYLOR COUNTY—		
Eastland Oil Co. et al, A. W. Hunter 2, Lot 15	40	2375
UPTON COUNTY—		
Gulf, J. T. McElroy 106	¶1¼-785	2799
WARD COUNTY—		
Atlantic-Penn Oil Co., Bennett 4-A	120	2548
California Co., B. D. Durgin 19	345	2593
WINKLER COUNTY—		
Magnolia, J. B. Walton 4	1000	2935
Sid Richardson et al, Scarborough 4-F	¶40	3325

*Failures; †Junked; ¶Million cu. ft. gas.

Gray County Wildcat Better When Deepened

Pampa, Texas.—Production gain was scored by The Texas Company in deepening W. H. Taylor 1-C, Gray County wildcat on the south flank of the granite ridge, to grant wash formation after previously showing for a small flowing well in dolomite lime between 2768 and 2900 feet. The well gauged 10 barrels hourly, with gas flow rated at 2,000,000 cubic feet daily when deeper drilling penetrated granite wash pay at 2991-93 and 2999-3006 feet. Tools were lost in making the new hole, but plans are to complete the well at its present depth. It is located at C NW Section 52, Block B-2, H&GN Ry. Survey, about 3½ miles southeast of nearest production, and within a large block of leases held by the company. Sinclair Prairie Oil Company also holds acreage in the area.

Bulk of the oil production in the Texas Panhandle is found on the north flank of the granite ridge that extends in a northwest to southeast direction across the district. The south side of the ridge has been sparsely explored for oil, although the upper section of the lime offers an abundance of gas. A few minor oil producing areas have been uncovered in Carson, Gray and Wheeler Counties, indicating that the south flank is to be considered as an oil source.

Amtex Oil Company's N. A. Stevenson 1, one of a pair of wildcat oil producers developed from saturated lime in the northwest portion of Hutchinson County last October, uncovered a lower oil horizon in deepening to 3330-3335 feet, or 19 feet below sea level. The hole filled 1500 feet with 36 gravity oil, with a small amount of gas, but was free of water, according to report. This wildcat is located 930 feet out of the NEc of Section 7, T. C. Ry. Survey, Block M-24, and was originally completed as a 10-barrel pumper after shot in lime at 3210-3295 feet. It showed salt water in lime at 3296-98 feet. Humble Oil & Refining Company's S. J. Logan 1, located in the A. B. Pedigo Survey, No. 1, is shut down for pipe line connection safter establishing an initial production of 50 barrels of oil, plus 14 percent water, daily from lime pay topped at 3190 feet. It was plugged back from 3296 to 3287 feet because of salt water, and shot. Nearest pipe line connection is about eight miles to the southwest, where Standish Pipe Line Company is serving the Stinnett area.

Appearance of salt water in flowing wells in the prolific section of western Wheeler County is becoming more evident. Water intrusion along with the difficulties experienced in procuring pipe line connections has greatly retarded development work. Water encroachment has been aggravated by the Texas Railroad Commission's rule requiring new completions to stand a five-day open flow gauge so as to establish potential for determining proration allowable. An example of the harmful effects of this rule is offered by Smith Brothers Refining Company and Hanlon-Buchanan, Inc.'s G. W. Williams 1, NEc W½ SE Section 49, Block 24, H&GN Ry. Survey, in developing 14 percent water on the fourth day after being completed in broken granite wash pay at 2505-2551 feet. The well gauged 1115 barrels of oil and 9,000,000 cubic feet of gas on the first day. Production dropped to 563 and 550 barrels the next two days, and on the fourth day produced 605 barrels of oil, plus 14 percent water.

A 45,000,000 cubic foot gasser has been made of Phillips Petroleum Company et al's Jas. C. Wilson, northeastern Moore County record depth test for the district, after plugging back from 8012 to 3190 feet. The gas pay in dolomite lime was shot with 200 quarts of nitro at 3135-75 feet. About 3300 feet, or 50 percent of the new string of 9⅞-inch pipe, and 3200 feet of the 13-inch casing used in making the test for production in the Ordovician, or Arbuckle lime zone, was shot off and salvaged.

Nine of the 10 new wells added by the Panhandle last week were oil wells, while the other was a dry gasser. These new wells accounted for an aggregate of 3,065 barrels of oil and 56,000,000 cubic feet of gas production daily.

New wells added in Texas Panhandle within past week follow:

Company, Well and Location	Init. Prod. Bbls.	Depth
GRAY COUNTY—		
Champlin Ref. Co., D. J. McLaughlin 8	305	3040
Danciger O&R Co., E. G. Barrett 3	505	3288
Kewanee O&G Co., R. Arnold-Morgan 2	285	3253
Skelly Oil Co., H. Schafer 17-E	340	3290
Texas Co., J. B. Barrett 4	35	3200
W. H. Taylor 1-C	¶2-250	3006
HUTCHINSON COUNTY—		
Gulf-Panhandle Ref. Co., Dial 50	180	3067
Humble, S. J. Logan 1	50	3296
MOORE COUNTY—		
Phillips et al, J. C. Wilson 2	¶45	8012
WHEELER COUNTY—		
Smith Bros. Ref. Co.-Hanlon Buchanan, Inc., G. W. Williams 1	¶9-1115	2551

*Failures; †Junked; ¶Million cu. ft. gas.

Tanglewood Wildcat To Test Oil Showing

San Antonio, Texas.—James E. Pederson's C. A. Turner 1, Lee County wildcat, is making preparations to test at 6347 feet, where it has shown oil and gas in lime and chalk breaks. The well is located in the David Hudson survey, 1½ miles southeast of Tanglewood on what is known as the Tanglewood fault.

The well had difficulties with collapsing of surface string of casing and was several weeks milling out and straightening the hole before the 6⅝-inch casing could be run to 5135 feet, leaving 1212 feet of open hole.

The elevation is 438 feet. It topped the Midway at 2990 feet, Navarro at 3350 feet, Austin chalk at 4910 feet, Georgetown at 6120 feet, and likely is at the top of the Edwards at this level.

The prospect is of considerable in-

terest in as much as a fault of considerable throw has been established. On the basis of geological information, Pederson paid a cash bonus of $10,000 for the 680-acre drilling block, as well as assumed a drilling obligation and an override of 1/24 to Glenn Stewart.

Pearsall Prospect Is Being Tested Again

San Antonio, Texas.—Amerada Petroleum Corporation's Halff and Oppenheimer 2, prospect just southwest of Pearsall, Frio County, is being given another production test in the Navarro sands. The well has been plugged back again to 3925 feet, casing ripped from 3907-15 feet.

According to latest reports, the well is making about 15,000,000 cubic feet of gas per day and has a shut in pressure of 1250 pounds. It sprays about three barrels of fluid per hour, two thirds salt water and one third 24 gravity oil. The oil is not badly cut. The well will be given a more thorough test as soon as a separator is installed.

This test, located in the J. H. Gibson survey, originally was drilled to 10,050 feet in the Trinity, where drill stem was stuck and the well was plugged back for several tests in the Navarro sands at depths just below the present level, all showing gas, salt water and oil.

Colletto Creek Again Active

San Antonio, Texas.—Colletto Creek, Victoria County, again comes to life with several locations and one new producer being reported during the week. Plummer Drilling Company's Zimmer 2, is a high-pressure well, flowing about 35 barrels of oil per day. It is blowing too much gas to be produced and has a pressure of 1150 pounds. It likely will be deepened. The test had sand at 2764-96 feet, its total depth, with the exception of a shale break at 2781-85 feet.

Plummer Drilling Company has located Zimmer 3, Nutex Oil Company Zimmer 3, American Liberty Oil Company Anton Prybil 2 and 3, and Petrol Corporation Machalec 2. All will be drilled in the near future.

Houston Oil Company finally abandoned Maurer 1, originally drilled by John F. Camp. The well was completed as a gasser spraying oil at 4442-60 feet, and the Houston Oil Company decided to work it over. The well was plugged back, sidetracked and re-drilled to shallower sands, not developing production. It went on down to the 4400-foot sand and was abandoned.

Samfordyce Given Small South Extension Last Week

San Antonio, Texas.—The entire Rio Grande valley is in the center of an active wildcatting play, a follow-up to the development in the Samfordyce area of Hidalgo County. A number of interesting blocks are being assembled and geophysical and geological work done preparatory to drilling of deep tests, ranging below 5,000 feet.

The field, itself, continues to offer a play with operators feeling for its limits, location at a time. Several tests, considerable distance from production failed to make producers in the regular sand and have been abandoned temporarily.

Weekly Oil Corporation apparently provided a 600-foot south extension to the extreme southeastern side of the field with C. E. Smith 1, NE corner Tract 278, Porcion 40. It had gas sand at 2725-40 feet, shale 2740-45 feet and oil sand 2745-50 feet, stopping in sand. Casing was set at 2745 feet and the well is now in process of completion.

Only one producer was reported, that being Gholson Drilling Company's F. Farias 1, Block 273, Porcion 39, flowing about 20 barrels an hour from 2794-2802 feet, showing 325 pounds working pressure on ⅛-inch choke and 200 pounds closed in pressure on the casing. It is not fully completed.

Union Sulphur Company has passed the 7900-foot mark in its American Rio Grande Land and Irrigation Company 2, Lot 2080, Block 86, North Capisallo District, Llano Grande Grant, Hidalgo County. It is the deepest hole ever drilled in that portion of South Texas.

Kerr County Wildcat Showing for Producer

San Antonio, Texas.—The Hill Country, sometimes referred to as the Lower Edwards Plateau, again came into prominence last week with a wildcat in southwestern Kerr County showing for production in the Pennsylvanian formation.

Jeff Love and Eastland Oil Company's Jeff Love 5-E, located 1650 feet southeast of the Love 1, is standing 1500 feet in oil at 3530 feet. It has been swabbed several days, but the fluid level cannot be lowered. Casing is set at 3065 feet.

The exact location of the well is 1580 feet from the southeast corner and 300 feet from the north line of Section 1591, and about 45 miles west of Kerrville.

This area first was brought into the limelight December 18, 1930, when Evans and Gant's Jeff Love, just northwest of this test, produced 65 barrels of 39.8 gravity oil from 3374-91 feet in three hours. It showed considerable salt water, the ratio being 75 percent water and 25 percent oil. The well never was completed as a commercial producer, although it did produce about 500 barrels of oil before finally being abandoned. Other operations followed with deeper tests finding showings in the Mississippian just short of 6,000 feet.

The district has been looked upon favorably for years and with the completion of this well, as is likely, much activity is to be expected.

The hill country generally is receiving a heavy clay and a number of new locations have been made for tests to the Pennsylvanian and Ordovician. Several important structures, controlled by long time leases are expected to be drilled shortly in as much as the terms on the leases are soon to expire.

Two New Fields in Government Wells Area

San Antonio, Texas.—Two new fields, one on the east side and another on the west side of the Government Wells field, were added to Duval County during the past few days. Each were from different sands.

Humble Oil & Refining Company's Ruiz 1, 2080 feet from the south line and 200 feet from the west line of Section 553, BS & F survey, about two miles east of the Government Wells field, made a drill stem test late in the week from 2780-90 feet, which showed 500 feet of 25 gravity pipe line oil with 50 pounds working pressure in 10 minutes. The sand was logged at 2785-90 feet, but the test included more formation. Casing has been set.

This sand is not definitely classified, although it is too low to be the Government Wells sand, it is thought, and a little too high for the Mirando sand.

Mills Bennett's Duval County Ranch 1, located five miles west of the Government Wells field, is a gasser in the Cole series. The well drilled to 3006 feet, plugged back to 1280 feet, whipstocked, sidetracked and drilled to 1505 feet, topping the sand at 1471 feet, where casing was set. The volume was estimated at 15,000,000 cubic feet per day, with the rock pressure at 525 pounds. The exact location is 150 feet from the north line and 4200 feet from the east line of section 192.

These discoveries are looked upon as being of considerable importance, in as much as the Government Wells field itself is one of the largest areas ever opened in South Texas, having approximately 7,000 proved acres and around 650 producing oil wells, and has a probable ultimate recovery of 75,000,000 barrels of oil.

Another Well Being Completed at Caesar

San Antonio, Texas.—Luling Oil & Gas Company is completing its third oil producer in the Caesar field, northern Bee County. It is B. B. Ruhmann 4-B, Block 39, Thurston sub, Hodges Survey, just west of the other two producers.

The well had the Pettus sand at 3068-87 feet and showed 10 fourbles of oil in 30 minutes on a drill stem test. There was only a small amount of gas.

Oil from this field is being sold at $1.00 per barrel. It is being piped through the company's recently completed line to Burnell, about four miles to the northeast and loaded on tank car. The company has about 100 barrels per day production.

New Field and New Sand at West Tuleta

San Antonio, Texas.—Another new Pettus trend oil field was in the making over the week end with Dirks Brothers et al preparing to complete J. E. Roth 1, Bee County, showing for a producer at 3884 feet. The well is located two miles west of the north end of the West Tuleta field and is nearly three miles southwest of the Southwest Pettus (Damac) field.

On a drill stem test at 3880-84 feet, the well developed 750 feet of regular Pettus crude, no water and 55 pounds working pressure in 15 minutes, the chokes being 5/16-inch top and ¼-inch bottom. The sand was topped at 3882 feet, hence the test was of only two feet of sand. Casing has been set.

The exact location is 990 feet from the north line and 330 feet from the west line of the southwest quarter of Section 7, J. M. Uranga Grant.

The discovery is believed to have opened a new field, rather than provide an extension to the West Tuleta field. It already is cut off from the Southwest Pettus field by dry holes, but is in trend with that area, indicating a "pick-up" of production from the same general field in a separate pool. It is possible that it will connect up with West Tuleta, but faulting between the well and the producing area more or less eliminates this possibility.

The well was drilled by the same operators that discovered the West Tuleta field several months ago. Since the West Tuleta field's discovery, there have been 24 oil producers drilled. In addition, there are a half dozen active operations in the field with several more to be started.

Whisenant and Trenchard's Mrs. William Rapp 2-B, SW NE NE Section 10, on the extreme eastern side of the West Tuleta field, made a drill stem test of a sand in the Cole series at 3075-90 feet which netted one joint of oil, one joint of oily mud and a fair gas pressure. It was carried to the regular sand, topped at 3898 feet, casing set at 3898 feet and the well is now waiting on cement at 3904 feet. It now appears as though a new sand will be developed in the field, especially to the east of the present producing area.

Deeper Sand Found In the Sinton Field

San Antonio, Texas.—Heep Oil Corporation apparently has established a new sand in the Sinton field of San Patricio County, 450 feet below the present producing level. The company's Welder 4, three-quarters of a mile east and south of production and in the Portillo survey, is flowing 60 barrels of 33 gravity oil and about 150 barrels of salt water under a working pressure of 1600 pounds on the tubing, through ¼-inch choke, and 1900 pounds on the casing, closed in. The well originally was drilled to 7247 feet, where drill pipe was stuck, and plugged back to 5900 feet, casing being perforated at 5880-90 feet.

The water in the well is not believed to be from the oil sand, but coming from around the casing. As a result, it is highly probable that the well will be cemented back to the regular 5400-foot sand and completed as a high-pressure well, spraying distillate and another well drilled to the 5800-foot sand.

The Heep well encountered several interesting sands, one being at 6614-61 feet, which showed considerable oil, but also made some salt water.

Plymouth Oil Company's Welder 2-B, Musquiz survey, on the west side of the field, is trying to wash over drill stem, which is stuck at 5387 feet, atop the regular producing level.

Dinero Field

San Antonio, Texas.—Lion Oil Refining Company's McNeil 2, in the Dinero field of Live Oak County, has plugged back to 4295 feet, is drilling out cement, and will perforate casing to test the regular horizon in the field. This well was drilled to 6034 feet, and the bottom 70 feet of the hole tested. It developed some gas, showed 1,000 pounds pressure, and flowed a little oil and salt water.

With an elevation of 146 feet, derrick floor, it topped the Hockleyensis at 4306 and the Cook Mountain at 5710 feet. The regular sand was found at 4307 feet.

Large Campaign Is in Store for Cole Field

San Antonio, Texas.—A heavy drilling campaign apparently is in store for the Cole field of Webb County, where a 3400-foot sand at the top of the Cook Mountain recently was established. It is likely that at least 10 rigs will be running in the field after the new year with American Liberty Oil Company and Sun Oil Company being the main developers. There have been 22 oil producers completed in the new horizon.

American Liberty Oil Company added a 40-barrel an hour well, flowing through ½-inch choke, with A. M. Bruni 7-A, located in survey 6, Arispe Grant. The well had the sand at 3415-24 feet, and set seven-inch casing at 3410 feet.

The company has announced locations for Bruni 8-A, 9-A, 10-A, and 11-A to be drilled immediately. It is likely that three rigs will be put to work by this company. It has plans for the drilling of a total of 32 wells in the present campaign.

Sun Oil Company, which has three excellent producers, has announced locations for A. M. Bruni 4, 5, 6, 7 and 8.

Other active operators in the field include Herman Brown, Cole Petroleum Company Highland Oil Company, O. W. Killam, Magnolia Petroleum Company.

Magnolia Petroleum Company's Brennan-Benavides 5, three miles east of the deep sand section of the field, but still in the producing area, looks like an excellent producer at 2774 feet. It set casing at 2768 feet after showing 1600 feet of oil on a 15-minute drill stem test. The plugs are now being drilled. The well is in the north corner of Block 456-457, Hale subdivision of Arispe Grant.

Thirty-One Tests Are Completed in South Texas

San Antonio, Texas. — South Texas will see 1934 close with one of the most active drilling campaigns in the history of the territory. The development work includes scattered operations through a number of fields, as well as a tremendous amount of wildcatting.

This increase is especially noted through the Jackson trend, which during the year has provided such new fields as West Tuleta, Caesar, Dinero, Cole deep sand, and others. These fields now are in the midst of their development campaign, while likely structures along trend are being rapidly exploited.

The week's new completions were well distributed over the territory, con-

**The material shown here consists of three complete cones weighing 8 pounds; and 150 lbs. of additional iron and steel cuttings.*

The Cavins is being used more extensively than ever before because it has proved conclusively that it is without an equal for the following purposes:

1. Breaking hard packed sand bridges. Also, ordinary sand may be cleaned out in about one-third the time formerly required for such jobs.
2. To recover such fish as pins, cones, discs, cuttings of all kinds, rubber, etc., by means of a junk trap or basket attached to bottom. (*See above.)
3. Cleaning perforations, or screen. During ordinary bailing operations, the sand is drawn into the tool from behind the pipe, thoroughly cleaning and washing the perforations.
4. Cleaning out sand bridged tubing, for which the 2-inch size is used.
5. Cleaning out sand around and in "fish" in order to permit a socket or other fishing tool to grip the fish.

Write for bulletin and other data describing how The Cavins saves time, labor and money on all cleaning-out jobs. It's the easiest, cheapest, and best way.

The CAVINS CO.

2853 Cherry Avenue, Long Beach, California, U. S. A.
Cable Address: "Cavins, Long Beach"
R. J. Eiche, Foreign Representative

BRANCHES AT:
Taft, Bakersfield, Goleta and Santa Paula, California
Cavins Clean-Out Service:
Oklahoma City, Oklahoma and Wichita, Kansas
Cavins Bailer Service:
Houston and Kilgore, Texas and Shreveport, Louisiana

siderable new flush production being added.

Company, Well and Location	Init. Prod. Bbls.	Depth
BANDERA COUNTY—		
A. P. Crane & Co., Watson 1, 988 ft nel, 926 ft sel Sec. 71, A. Curvier sur	*	1790
BEE COUNTY—		
Humble O&R Co., D. Fox 1, 7500 ft nl, 3370 ft el of 1885-ac tr, Michael Fox sur	*	5667
Edwin M. Jones, Skinner-Harris 3, nw sec 10	500	3943
DUVAL COUNTY—		
Mills Bennett, Duval County Ranch Co. 1, 150 ft nl, 4200 ft el, Sec 192, pb 1505 ft. Opens new field.	¶15	3006
Brown & Nessley, W. P. Runnels 4, Sec. 62	75	2366
Curry 1, Sec. 62	250	2365
Gov't Wells Oil Co., Lundell-State 8, Sec. 60	290	2276
Magnolia Pet. Co., J. O. Wilson 10, Sec. 248	25	2433
W. C. McBride, Inc., E. R. Hagist 1-A, 330 ft nl and el Sec 265	†	2160
Trapshooter Reilly O&R Co., W. Hahl 6, Blk 27, Sec. 250	45	2356
JACKSON COUNTY—		
Phillips Pet. Co., Drummond 1, 466 ft el of tr, 466 ft s Vanderbilt townsite, Musquiz sur	*	7042
LIVE OAK COUNTY—		
Helmerich & Payne, Inc., H. Cartwright 1, 660 ft swl, 1800 ft nwl, Sec. 1.	*	6001
Jane Oil Co., H. L. Lark 3, E. W. B. Scrugham sur	*	1000
McMULLEN COUNTY—		
R. P. Whitfield, L. Jacob Corp. 3, 240 ft el, 275 ft sl 70-ac tr, ne¼ Sec. 9	*	927
MEDINA COUNTY—		
Scoggins & Sanders, L. W. Burrell 1, 150 ft el, 1750 ft nl, M. E. Gage sur 395, temp abnd.	*	1812
REFUGIO COUNTY—		
Humble Oil & Ref Co., Fannie Heard 10, Crunk sur	300	4390
J. F. B. Heard 16, Peoples sur	275	4390
G. Jeffries, J. F. Power 1, 759 ft nl, 1812 ft el of 500-ac tr, Garza & Vidauri sur	*	4523
United Prod. Co., M. F. Lambert 15, Blk 15, Harwick sur	250	3518
SAN PATRICIO COUNTY—		
Beaseley & Maxwell, Saddler 1, 300 ft sl and el Blk 1, T. Perez sur, Sec. 32	*	6006
TRAVIS COUNTY—		
Marts & Beavens' Emil Bloomquist 1, Peter C. Harrison sur, 150 ft nwl, swl of 99.5 ac tr.	*	1550
UVALDE COUNTY—		
T. T. Word, K. S. Truelove 1-B, 2960 ft el, 650 ft nl 3391-ac tr, Elam sur	*	2275
VICTORIA COUNTY—		
Houston Oil Co., Maurer 1, R. Manchola gr (wo)	*	4460
The Texas Co. E. Foster 1, 2900 ft swl, 980 ft nwl of T&NO sur. No. 10	*	3100
WEBB COUNTY—		
American Liberty Oil Co., A. M. Bruni 7-A, sur 6, Foltz sub, Arispe Gr.	960	3424
Sun Oil Co., A. M. Bruni 2, Blk 9, Sec. 5	800	3429
WILLACY COUNTY—		
W. W. Silk et al, Stillman 1, 660 ft sl, 200 ft wl Lot 16, Blk 130, Stillman ranch	†	2000
WILLIAMSON COUNTY—		
Stalle & Caffey, A. J. Nelson 1, 850 ft sel, 150 ft nel of tr, Barney C. Love sur	*	355
ZAPATA COUNTY—		
Ben Banner, M. Trevino 1, Blk 17, Sec. 411	¶15	1632
SR&C Oil Corp., Trevino 2-H (was 4-F) Blk 20, Sec. 211	¶25	1657
The Texas Co., Whitehead 59, Cerrito Blanco Gr.	10	1206

*Failures; †Junked; ¶Million cu. ft. gas.

Kittrell Well Flows 52 Barrels Per Hour

Houston.—Boone Brothers' Trinity State Bank 2, 660 feet southwest of the discovery well for the Kittrell filed, C. McEllis Survey, Houston County, was completed during the past week for 52 barrels per hour through a half-inch choke with a tubing pressure of 500 pounds and casing pressure of 550 pounds. This is the second producer for the operators in the new field. Boone Brothers have made location for Trinity State Bank 3, 594 feet southwest of No. 2 and 330 feet southeast of the northwest line of C. McEllis Survey.

On a drill stem test from 1973 to 2010 feet the well showed 750 feet of clean oil. Seven-inch casing was set at 1973 feet. The well is reported to be higher than the discovery well. The second test for Boone Brothers on the Trinity State Bank lease, topped the Crockett at 1063 feet, Sparta 1380 and Weeches at 1583 feet. This well makes the third commercial producer for the field.

Humble Oil & Refining Company's Shaw 3, C. McEllis Survey, Kittrell field, was preparing to drill ahead at 1990 feet, after making a drill stem test from 1944 to 1981 feet which showed oil and mud in 12 minutes. Seven-inch casing was set at 1946 feet. Same operator's Shaw 4, northwest of Shaw 2, C. McEllis Survey, Kittrell field, was reaming at 2007 feet.

Humble Oil & Refining Company has made location for Shaw 5, 990 fet southeast and 330 feet from the southwest line of 100-acre tract in the C. McEllis Survey. At the end of the week the operators were rigging up.

The discovery well for the Kittrell field for the month of November produced over 7500 barrels of oil. The well is making approximately 270 per day through a quarter-inch choke. Tubing pressure is 210 pounds; casing 710 pounds. The well is making from two to five percent basic sediment and fresh water.

Humble Oil & Refining Company's Shaw 1, which went dead some time ago produced on October 10, 1934, 144 barrels; October 11, one barrel; October 12, 21 barrels and then went dead. On November 16, 1934, the well made 44 barrels; November 17, 10 barrels and November 18, six barrels. On December 7, 152 barrels; December 8, 156 barrels; December 9, 153 barrels and on December 10, 149 barrels. December 11, 134 barrels. The oil flowed through a quarter-inch choke with 810 pounds on the tubing and the same amount on the casing.

When Humble Oil & Refining Company's Shaw 1 went dead the percentage of basic sediment and water in Boone Brothers' Trinity State Bank 1, the discovery well for the field, dropped from

eight percent to two percent. While the well was flowing the discovery well made eight percent basic sediment and water.

In Angelina County, Koch and Duffy are building derrick and moving in rig for a test on Mrs. L. W. Alberry's 303-acre tract in the J. A. Prado Survey. The well was reported some time ago and is north of Diboll.

In Trinity County, Moore & McLaughlin's White 1, 250 varas from the north line and 263 feet from the east line of 56-acre tract in Goff Survey, was moving in material at the close of the week.

New Sand Found In Hankamer Field

Houston.—A new sand was uncovered in the Hankamer field of Liberty County when Gulf Production Company's Crow & Jacobs 3, 150 feet from the south line and 500 feet from the west line of survey and lease line in H. & T. C. Survey, No. 21, Abstract 253, showed good indications of commercial production during the past week from sands found from 5128 to 5162 feet.

On a drill stem test from the above depth the well showed two thribbles of mud and 1400 feet of 27.5 gravity oil through a quarter-inch choke on top and a three eighths-inch choke on bottom and through a four-inch drill pipe. The pressure was 250 pounds. The test was made in 10 minutes. The operators have set nine and five eighths-inch casing and strainer and liner to make production test. This new pay is from the Oligocene formation. The sand was topped around 5060 feet.

On two recent drill stem tests the well showed oil and salt water. From 4500 to 4547 feet, in 10 minutes the well made 26 thribbles of mud, oil and salt water through a quarter-inch and a three eighths-inch choke. The test was made in 17 minutes. From 5048 to 5060 feet the well showed one thribble of oil cut with mud with no pressure. The test was made with the same chokes as mentioned above.

With the discovery of this new deep pay this old field should take on new life and several of the shallower producing wells in the field will be carried on down to the new sand.

Gulf Production Company has made location for E. W. Boyt 17, 463 feet south and 102 feet east of the northeast corner of the southeast corner of the Ezzell et al 175-acre tract, on a 625-acre tract in the A. A. Allen Survey.

Heretofore the field has been producing from the Miocene formation 2500 feet and others from around 2900 feet, 3600, 3800, 4000, 4800 and 4900 feet. However there are a number of lenticular sands with different gravities of oil.

USE "SP" TRAINS

CHEAPER THAN DRIVING YOUR CAR!

Leave your car at home. Go by train! More time "there." Speed as you sleep, eat, rest, read, relax, see scenery. On-time schedules!

ADVANTAGES LIKE this

Southern Pacific offers outstanding service between major points in Texas, Louisiana and Oklahoma—to and from California and the West.

A few fast trains of a great fleet: "Sunset Limited," "Sunbeam," "Owl," "Sunset Mail," "New Orleans Limited," "Texas Limited" and the "Border Limited."

ASK YOUR AGENT!

"SP" DINING CAR "MEALS SELECT"

80c Enjoy a delicious five-course luncheon or dinner from 80c to $1.25.

50c An excellent club breakfast for as little as 50c. A la Carte service, too.

Southern Pacific

J. T. MONROE, Passenger Traffic Manager
Southern Pacific Building, Houston, Texas

SHIP VIA "SP"... PICK-UP & DELIVERY SERVICE

Hastings Area Well Is Washing in to Complete

Houston.—Stanolind Oil & Gas Company's J. W. Surface 1, Hastings area, four miles north of Alvin, A. C. H. & B. Survey, Abstract 462, Brazoria County, is the most interesting wildcat on the Texas Gulf Coast at present as it has indicated possibilities of opening another oil field. The well was being washed in to complete at the close of the week. Nine and five eights-inch casing was set at 5975 feet. The well topped the Discorbis at 5290 feet, Heterostegina at 5640 and Marginulina at 5810 feet.

J. W. Surface 1 had a reported saturated oil sand and gas show in a core from 5940 to 5952 feet, the first good showing being around 5965 feet, and another sand from 5980 to 5990 feet, the latter depth being the bottom of the hole. The operators ran an electrical logging device at 5990 feet, which showed a gas sand with a taste of distillate from 5942 to 5952 feet and a probable oil sand at 5967 feet. The operators have installed a 1000-barrel storage tank. If this well proves a discovery well it will be anoher Marginulina producer for the Texas Gulf Coast.

It is reported Stanolind Oil & Gas Company is paying over $450 per acre for royalty within a half mile of the well, and two miles southeast of the possible discovery well acreage is being sold for $110 per acre. One 30-acre tract went at that price. The lease holders in the area are asking $750 per acre for royalty. The well is being drilled on a torsion balance and seismograph reflection prospect worked by Stanolind Oil & Gas Company and several other major oil companies.

Stanolind Oil & Gas Company has another important test, which now is 326 feet in the Cockfield. The well is Thorp 1, due west of Katy, M. Bennet Survey, Waller County. The bottom of the hole is 6486 feet. The well has had approximately 25 feet of sand which showed gas and distillate. From 6400 to 6409 feet the well had a showing of gas. This test is being drilled on a unitized block and is holding considerable attention of the Gulf Coast oil operators. It topped the Cockfield at 6160 feet and is reported to be running around 150 feet high as compared to Amerada-Stanolind's Mary Manor 1, drilled five miles to the north. From 6379 to 6400 feet it found an odor of gas and distillate in spots. From 6384 to 6389 feet a brackish taste was noticed. On the core from 6400 to 6409 feet the well showed no salt water.

Listen, Joe

How would you like to spend Christmas in a cold, drafty house that shook and rattled with every cold wind? Terrible, eh? It's worse than terrible if you had to live in it the year 'round.

Field workers not only like, but deserve, comfortable, substantial, LIVABLE homes. Give them Houston Ready-Cut House Company homes to live in. Soundly and sturdily built, these homes will last for years, in one location or another. By protecting the workers' health and happiness, by their durability, these homes are a sound investment—economically and productively.

Write, phone or wire for descriptive Catalog.

HOUSTON
READY-CUT HOUSE CO.
HOUSTON
TEXAS

Second Location Made at Eureka

Houston.—The second location for the new Eureka filed of Harris County was announced during the past week when Means & McGehee applied to drill Laura Lackner 1, 1803 feet north of the southeast corner of survey and 9857 feet west of the southeast corner of 80-acre tract in the H. Rienerman Survey about three quarters of a mile northwest of the discovery well. The discovery well for the area made about eight barrels of crude oil during the past week while the operators were killing the well to work it over.

Jefferson County Test Abandoned at 6769 Feet

Houston.—Gulf Production Company's Thomas 15, Fannett, W. H. Smith Survey, Jefferson County, was abandoned in salt at 6769 feet during the past week. The well is reported to have drilled through 4040 feet of solid salt having topped that formation at 2729 feet. Before the operators encountered solid salt a salt streak was found from 2080 to 2365 feet. The operators drilled to 6769 feet in the formation and never did get out of the salt and the hole was plugged back to 2012 feet where the hole was sidetracked and was carried down to 5503 feet and was abandoned. The Fannett dome is a mushroom type salt dome.

Half of Texas Coast Completions Produce

Houston.—Of the 22 completions along the Texas Gulf Coast during the past week, one half were producing wells with an initial production of 5187 barrels of crude oil daily. Four of the completions were workovers. Danciger Oil & Refining Company's W. S. Hunt A-3, 200 feet southwest of W. S. Hunt A-3, W. C. Carson Survey, Pledger field, Brazoria County, which was abandoned at 6797 feet some time ago, was completed for 13,000,000 cubic feet of gas daily from 6797 feet. The Texas Company's Fee 315, Sour Lake, Hardin County, was completed for 250,000 cubic feet of gas daily from 1660 feet. The remaining nine completions were failures.

Miramar Corporation (Sterling Oil & Refining Company) Hogg 3, 100 feet from Hogg 2, M. Verner Survey, West Columbia, Brazoria County, was abandoned at 6306 feet. It established a new depth record for the field. At 6000 feet the well blew out and at 6087 feet made 10 barrels of pipe line oil in one hour through a quarter-inch choke with a tubing pressure of 500 pounds and casing pressure of 800 pounds. The hole caved in and the well was abandoned after the operators worked it over.

In the Thompson field of Fort Bend County, Humble Oil & Refining Company's Lockwood-Sharp A-33, J. Rabb Survey, direct south equidistant offset to Gulf Production Company's Myers 11, was completed for 49 barrels daily through a three eighths-inch choke from 5297 feet. Gulf Production Company's Myers 12, J. Rabb Survey, Thompson field, was abandoned at 5403 feet. San Jacinto Oil Company's Blakely 5, E. Drew Survey, Thompson field, was waiting on cement to set at 3730 feet with the bottom of the

hole at 3809 feet. Oil sand was topped around 3750 feet and six-inch casing has been set at 3730 feet.

Completions along the Texas Gulf Coast during the past week are as follows:

Company, Well and Location	Init. Prod. Bbls.	Depth
BARBERS HILL—		
Sun Oil Co., Higgins 6	1000	4338
Sinclair Prairie Oil Co., Wilburn 12 (wo)	150	5157
CONROE—		
Mike Koury 1, State 1	1464	5104
FANNETT—		
Gulf Prod. Co. 15	*	5503
HIGH ISLAND—		
Yount-Lee Oil Co., Smith 10 (wo)	220	5311
KITTRELL—		
Humble O&R Co., Tex. L.L.L. Co. 2	*	....
Tex. L.L.L. Co. 3	*	....
HULL—		
Republic Prod. Co., Dolbear 135 (wo)	300	2423
Dolbear 151 (wo)	*	4884
LIVINGSTON—		
B. M. York, Kingsbury 2	*	4353
MANVEL—		
The Texas Co., Belcher B-13	312	5160
PLEDGER—		
Danciger Oil & Ref. Co., W. S. Hunt A-3	¶13	6797
RACCOON BEND—		
Humble O&R Co., A. A. Sanders 8-X	*	3220
SARATOGA—		
Hines Brothers, Caswell 1	50	3321
SOUR LAKE—		
The Texas Co., Fee 315	¶¼	1660
TOMBALL—		
Humble O&R Co., F. Kobs A-3	578	5568
Quilter 5-B	512	5554
Rudal 2	552	5597
THOMPSON—		
Gulf Prod. Co., Meyers 12	*	5403
Humble O&R Co., Lockwood-Sharp A-33	49	5297
WEST COLUMBIA—		
Miramar Corp., Hogg 3	*	6306
AUSTIN COUNTY—		
J. F. Whellis, Jr., et al's Whittenburg 1, 1100 ft fr sw line, 330 ft fr se line of 200.2-ac tr in H&TC sur, sec 177	*	5636

*Failures; †Junked; ¶Million cu. ft. gas.

Liberty County Test May Be Abandoned

Houston.—Jack Frazier's Lynott Buffon 1, James Robeson Survey, Liberty County, was either preparing to abandon the well at 7511 feet or core 500 additional feet for geological information. November 20, 1934, the well was plugged back to 7350 feet and a drill stem test made from 7185 to 7350 feet, showing five stands of mud, no oil or gas. The test was made in 3½ hours. A three eighths-inch choke was used on top and bottom.

In Montgomery County, Smith & Cooper have made location for J. W. Scott 1, 466 feet west of the railroad and 466 feet south of the north line of the Scott 144-acre tract in F. B. Wheeler Survey. This well is in the area where the operators drilled Post 1, D. Roper Survey. The hole was carried down to 4007 feet before it was abandoned. A gas sand was encountered from 3693 to 3704 feet. From the last mentioned depth the operators made a drill stem test and the well showed 40 fourbles of salt water with a large gas pressure in 25 minutes.

Roanoke Field Test Is Going Deeper After Showing

Lake Charles, La.—In the Roanoke field of Jefferson Davis Parish, Humble Oil & Refining Company's Devilbiss 3, one mile southwest of the discovery well, Section 14-9s-4w, was drilling in shale at 9570 feet after having a showing of oil from 9439 to 9446 feet. Same operator's Jernigan 1, Section 12-9s-4w, is drilling below 7845 feet and is reported to be running approximately 230 feet lower than the discovery well for the field. Humble Oil & Refining Company's Taylor 1, Section 12-9s-4w, was drilling at 7933 feet at the end of the week. The operators ran an electrical logging device at 7670 feet and the well showed to be running around 15 feet higher than Kratzer 1. On a drill stem test the well showed 1110 feet of 38 gravity oil from 7796 to 7822 feet. A quarter-inch choke was used on top and bottom with a 120-pound working pressure.

Shell Petroleum Corporation's R. C. Jarnigan 1, 660 feet due west of the discovery well, Section 12-9s-4w, was coring shale and sand with a faint cut of oil in spots and an odor at 9493 feet. Carter 1, Roanoke field, was drilling shale at 3760 feet, Kratzer 2, drilling shale 1693 feet.

Humble Oil & Refining Company has location for Clayton 1, 440 feet south and west of northeast corner of southeast quarter of Section 12-9s-4w, Jefferson Davis Parish. It is located about one mile due west of its Devilbiss 1-B.

Bosco Field Is Extended to South

Lake Charles, La.—The Bosco field of Acadia and St. Landry Parishes was extended about a half mile to the south and a little east when Superior Oil Producing Company's C. Meleancon 1, 375 feet south and 631 feet east of the northwest corner of Section 34-8s-3e, Acadia Parish, was finaled for 598 barrels of crude oil in 21 hours. The hole was drilled to 8620 feet where seven-inch casing was cemented at 8575 feet. The sand was topped at 8579 feet. After washing the well it responded and made on a two-hour gauge 22 barrels of oil per hour through a 11/64-inch choke with a tubing pressure of 1350 pounds; casing 1810 pounds. The well also made 430,000 cubic feet of gas daily along with the oil. This test proves considerable acreage in that direction. No doubt Standard Oil Company of Kansas now will drill its Mouton 1, 1500 feet east of the extension test, which was abandoned some time ago when Superior Oil Producing Company's Leo Kahn 1 was junked and abandoned at 7745 feet. Superior Oil Producing Company has made location for Meleancon 2, 2672 feet south and 1644 feet west of the northeast cor-

CATCH YOUR PIPE BEFORE IT STICKS

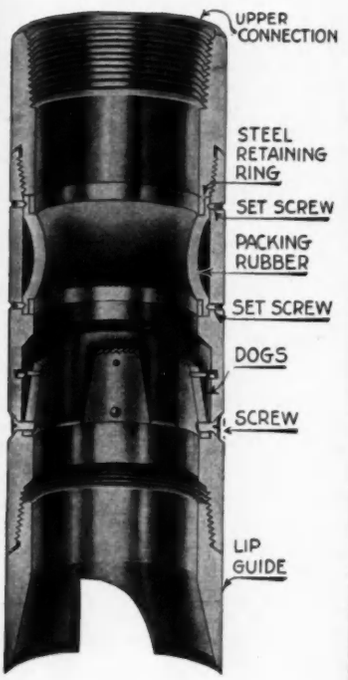
and

Entirely Eliminate

long-drawn-out, expensive, and hazardous

FISHING JOBS

often saving you the loss of the hole.



Use the

GRAY OVERSHOT

. . . SAFE . . . SIMPLE . . . EFFICIENT

Positively will perform that for which it is intended. Free from complications and tricky mechanisms that often do more harm than good.

POSITIVELY RELEASABLE

SAVE MONEY AND WORRY BY KEEPING A GRAY OVERSHOT ON THE FLOOR READY TO PICK UP PIPE BEFORE IT STICKS.

GRAY TOOL COMPANY Houston, Texas.

ner of Section 33-8s-3e. The well is located approximately 500 feet northwest of the junked hole and 1500 feet southwest of the recent extension test.

The previous week the field was extended to the west approximately 1200 feet when Superior Oil Producing Company completed J. S. Arceneaux 2, 1963 feet south and 1708 fet west of the northeast corner of Section 33-8s-3e, Acadia Parish, for 61 barrels per hour from 8687 feet. This well is one of the best producers in the field and is making 526,000 cubic feet of gas daily. The well is about 30 feet lower than the E. La Blanc 1, the furtherest west and south producer.

With the two above extension tests completed, no doubt the area will be explored further in these directions. Bosco has all the indications of becoming the biggest field in the South Louisiana Gulf Coast only now surpassed by Iowa in Jefferson Davis Parish.

Superior Oil Producing Company's U. T. Iseringhausen 3, 1817 feet east and 330 feet north of the southeast corner of Section 27-8s-3e, St. Landry Parish, was completed for a north extension to the field. The well made 333 barrels of oil on the first 22-hour gauge through a 10/64-inch choke with a tubing pressure of 1150 pounds; casing 1275 pounds. The bottom of the hole is 7851 feet. L. Lavergne 1, 500 feet north of Hernandez 2, Section 27-8s-3e, St. Landry Parish, was completed for 814 barrels in 21 hours through an 11/64-inch choke with a tubing pressure of 1050 pounds and casing pressure of 1450 pounds. The well also made around 497,000 cubic feet of gas daily. The bottom of the hole is 8714 feet.

Four Isle Discovery Well Is Cutting

Lake Charles, La.—The Texas Company's State Four Isle dome, Section 24-21s-16e, Terrebonne Parish, averaged 320 barrels of crude oil daily during the past week making about 40 percent salt water with a tubing pressure of 780 pounds.

It was reported some time ago that a Mississippi operator was dealing for Frederick Brothers 760 acres three quarters of a mile northwest of Whitstone Oil Company's Buckley 1, Bayou De Large, Terrebonne Parish. The deal is reported to be consummated and the operator is to commence drilling of a test within 90 days. Whitstone Oil Company's Buckley 1, is shut down at 3260 feet after showing seven thribbles of sand and salt water on a 10-minute drill stem test from 3073 to 3077 feet.

13 Completions Made In Louisiana Coast

Lake Charles, La.—There were 13 completions along the Louisiana Gulf Coast during the past week and of that amount eight resulted oil wells with an initial production of 4301 barrels of crude oil daily. Bosco field of Acadia and St. Landry Parishes lead the list with five nice producers and of the five producers three of them extended the field to the south, north and northwest. The remaining five wells were listed as failures.

Gulf Refining Company's Lutcher Moore A-1, four miles northeast of the Federal Petroleum Company's 8727-foot dry hole and 7½ miles northwest of DeQuincey, Section 25-6s-12w, Beauregard Parish was abandoned at 8354 feet after having a slight showing of oil at 7961 feet. This test topped the Heterostegina at 4100 feet, Vicksburg 4960 feet, Hockleyensis 6919, Cockfield 7653 feet.

The Texas Company's Calcasieu Lake 10-A, Calcasieu Lake, Section 1-14s-9w, was completed as a dry hole at 6784 feet. The hole was abandoned in anhydrite.

In St. Bernard Parish, J. Danciger's Battles 1, near Olivier, Section 135-14s-14e, was finaled at 6001 feet. The operators have moved the rig away after setting 7⅝-inch casing at 6001 feet. The operators are moving the rig to St. Tammany Parish to drill the Slidell prospect. This prospect is an old Shell Petroleum Corporation refraction high centering around Section 23-8s-14e.

Completions along the Louisiana Gulf Coast during the past week are as follow:

Company, Well and Location	Init. Prod. Bbls.	Depth
BOSCO—		
Superior Oil Producing Co., J. S. Arceneaux 2	1464	8687
U. T. Iseringhausen 3	333	7851
W. V. Larcade 2	919	8692
L. Lavergne 1	814	8714
M. Meleancon 1	598	8620
CALLIOU ISLAND—		
The Texas Co., State Calliou Island 16	*	4212
DOG LAKE—		
The Texas Co., State Dog Lake 15..	*	5233
LEESVILLE—		
Lincoln Oil Co., State 1	73	3479
The Texas Co., L. L. E. Leesville 21	100	3706
VINTON—		
Wilson Oil Company, Wilson 11, (wo)	100	3562
BEAUREGARD PARISH—		
Gulf Refining Co., Lutcher Moore 1-A	*	8354
CAMERON PARISH—		
The Texas Co., Calcasieu Lake 10-A.	*	6784
ST. BERNARD PARISH—		
J. Danciger, Battles 1	*	6001

*Failures; †Junked; ¶Million cu. ft. gas.

C-L-I-C-K!

--and your pipe is parted.

. . . at the exact point you want it loose, and without ruining a single joint.

This modern method of shooting loose stuck pipe is revolutionizing the job of pipe recovery. It is operated in conjunction with the H&L Cutting Tool Service.

4 H&L Crews Always on the Job

Write for literature

HALL & LOWREY INCORPORATED
PHONES: OFFICE 222—NIGHT 122—354
GOOSE CREEK, TEXAS, U.S.A.

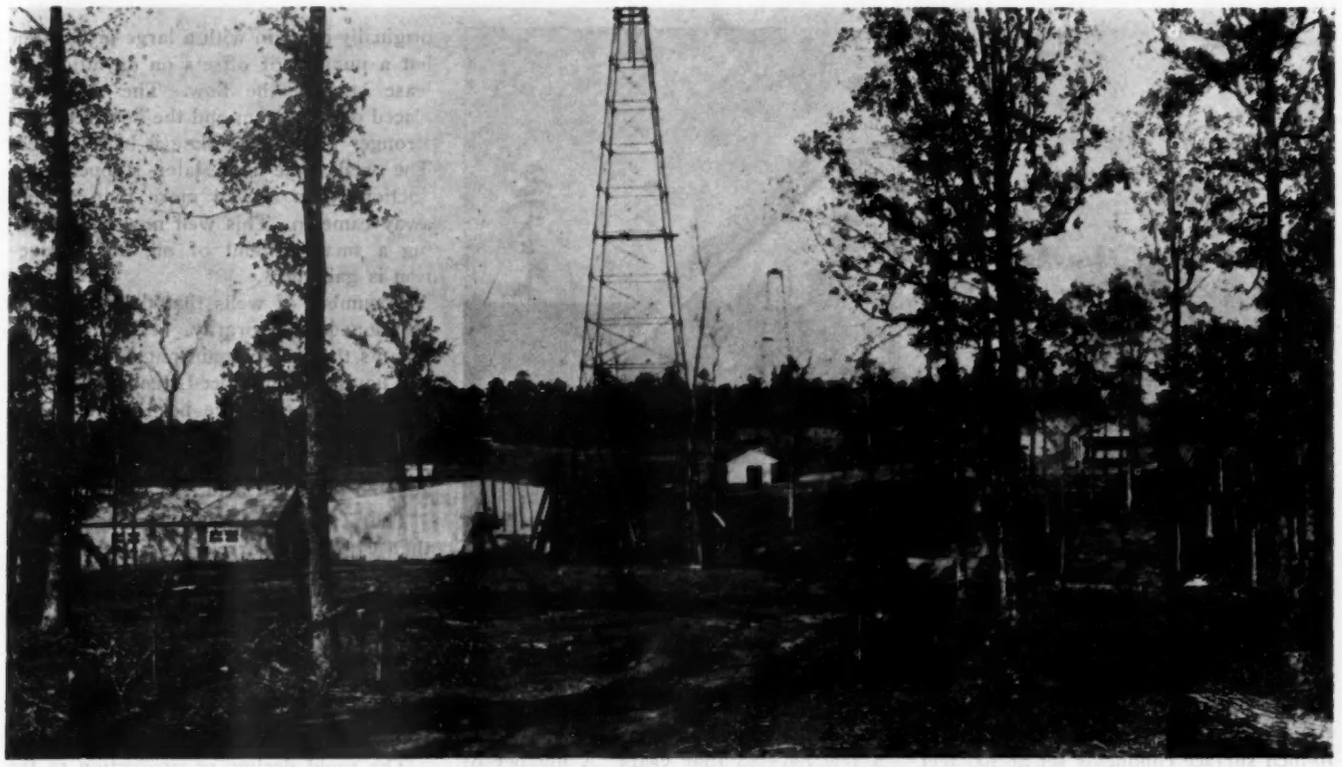
LOUISIANA REPRESENTATIVE: M. C. WOMACK—PHONE 89—THIBODEAUX, LA.

Gillis Well to Make A Drill Stem Test

Lake Charles, La.—Fohs Oil Company's O. H. Castle 1, south of the discovery well for the Gillis field, Section 13-9s-8w, Calcasieu Parish, was preparing to make a drill stem test at the end of the week after drilling into the sand around 6901 feet. The bottom of the hole is 6917 feet. The well had several showings of oil and the best from 6901 to 6904 feet.

The Texas Company has made location for Fee 1, 275 feet south and 220 feet west of Union Sulphur Company's State 1, which was the second producer for the Gillis field, and 50 feet from the bank of the Calcasieu River, Section 12-8w-9s, Calcasieu Parish.

Union Sulphur Company's State 2, Section 12-9s-8w, was driving piling at the end of the week and its Powell Lumber Company 1, same section was drilling in gumbo at 680 feet.



A number of leases in the Zwolle field are equipped with the latest pumping equipment

Zwolle Has Been an Erratic But Remarkable Producing Area

BRAD MILLS
Associate Editor

THE likelihood of production below the Nacatoch-Marl-Chalk zone in the Zwolle field has not been increased by the limited deep drilling done on and near the structure, but commercial production from the Woodbine, Washita, Upper Glen Rose, oolitic lime or anhydrite zones is a possibility. With the assumption that oil found in the shallow marl and chalk is of a migratory nature, many geologists hold to the theory that the lower and true source of production will be found. It is possible, however, that the original source or trap of the oil now may be barren. Two deep wells drilled in or near the field gave some hope that deeper production will be found.

Extensive development during the past six years in the Zwolle field has not satisfactorily defined the producing limits of the group of pockets or cavities that contain the light oil produced at irregular intervals along a 23-mile strip. Drilling now is at a standstill, and only the possibility of deeper producing formations gives the field a chance again to become one of the most active in Louisiana.

The Zwolle field has been famous, since its discovery late in 1928, as a "hit-or-miss" area, but even under strong odds against the operators enough drilling has been done to locate and largely deplete the cavities and porous pockets from which the bulk of production has come.

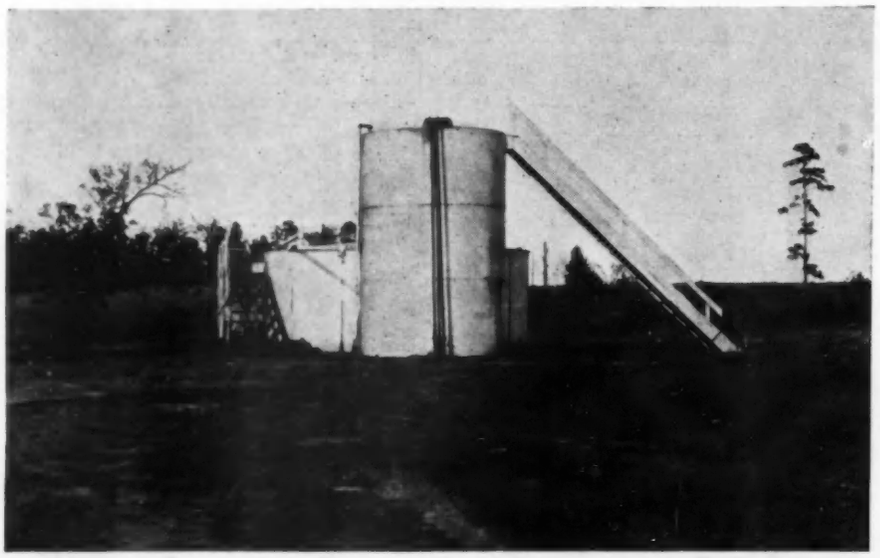
A geologist with one of the principal producing companies during the past two years has lowered the percentage of dry holes drilled in one part of the field by plotting and studying the results of drilling in all parts of the district. It has, however, been impossible to forecast with accuracy the outcome of drilling any well or group of wells. Very short trends have been suspected in several sectors within the field limits, but actual drilling has failed to substantiate such advance calculations.

All production has been obtained from marl and chalky formations found from 2250 feet to about 2900 feet, depending on the well location. The oil has accumulated in pockets, crevices, seams and porous portions of the chalky formations, the seal on top being afforded by a fairly uniform shale layer. The fact that most of the oil pockets stand on end has made it difficult to locate productive spots over the entire area. These upright cavities have yielded large producing wells a very short distince from dry holes and have increased the odds against successful completions.

A number of cavities apparently lie in a more horizontal position, and such sources have supported more than the usual number of producers. A number of pockets, cavities and porous seams have more than one vertical channel, and completion of a second or third well has often seriously affected or killed a producer located in another part of the field.

A study of individual well action fails to give a definite clue as to producing trends that might be helpful in locating the limited number of wells that probably will be drilled in the future. Such a study does show, however, that a field of this type is a dangerous one during the process of development, and that the most prolific producing period for the marl and chalky formations probably is in the past.

Because of the low cost of drilling a well in the Zwolle field, development exceeded that which should have been expected in a tricky area. A number of wells were drilled at a reported cost of



A battery of vapor-proof tanks at Zwolle. This type of storage permits use of gas from the top of a special gun barrel flow tank

$4000 each, while the average cost of a number of sectors was under $6000.

A 15-inch hole usually is started and a 10-inch surface conductor set at 100 feet. A nine-inch hole is drilled to the marl, which is encountered at various depths between 2100 and 2500 feet, and a string of six-inch casing is cemented just under the black shale. Drilling then is continued another 100 feet to include the full marl thickness and the hole is bailed to determine the marl possibilities. If production is indicated at this level, a liner is set. These liners are anchored so that they may be picked up easily. One of the largest operating companies has had trouble in pulling only one liner from a well that had been on production.

When production is not obtained in the marl, the usual plan is to drill ahead as much as 200 or 300 feet. The largest practical amount of the chalk is opened before abandonment is considered. The best production has been found in the base of the marl, or near the marl-chalk contact, but the upper marl has yielded some good producers. Production has been developed at all levels in the chalk, but the base of this formation is a doubtful factor. Salt water is encountered immediately below the chalk, and the pressure behind this water is usually high enough to cause it to rise about 200 feet from the surface. A heavy flow of salt water was reported in a number of early completions.

The six-inch shut-off string is cemented with from 50 to 70 sacks of cement. Two weeks are required to complete the average well. A number of small operators completed wells "barefooted," and some of the best producers in the field have been flowing from open hole below the shutoff. The principal function of the average liner is to prevent the hole from caving, rather than to check the loose sand. Many wells produce a very limited quantity of sand.

The life of a Zwolle well ranges from a few days to four years. A number of wells gained steadily for several months, while others have shown a steady loss. The oil seems restless and is undoubtedly influenced by factors that would have little effect in fields of another type. Some wells go to water, while others dry up. Three out of each four wells in one part of the field have dried up, and the fourth went to water.

The future action of a producing well is as uncertain as the drilling of new wells. One well belonging to Pelican Natural Gas Company produced more than 100,000 barrels of oil and suddenly stopped flowing. Two wells have produced more than 500,000 barrels each, and were by far the steadiest producers in the field. One of the best wells in the field came in with an initial flow of more than 3500 barrels daily through a 7/16-inch choke, and is still making 50 barrels of oil and 500 barrels of water on the pump. This well recently started to increase its production, following a long decline.

It has not been unusual for a single well in a given area to produce much longer than surrounding wells. One well is still pumping 38 barrels of oil daily in a sector that does not have another producing well. The well now on production apparently holds the key position in the matter of drainage. It has also produced without a liner since its completion.

Wells producing a limited amount of salt water give least trouble. The water is warm and is a distinct aid in handling paraffin. The water also separates readily from the oil and treating is seldom required.

Magnolia Petroleum Company lost and recovered production a number of times in one of its early completions. This well originally came in with a large production but a number of offsets on an adjoining lease stopped the flow. The well was placed on a vacuum and the flow returned stronger than at the time it had stopped. The well some time later stopped production when a well more than a mile away came in. This well now is producing a small amount of oil, but production is gaining.

A number of wells that dried up were abandoned temporarily. After a few months they were again put on the pump and have since produced steadily. A large number of wells have been treated with acid and results have been very satisfactory. The producing formation is well adapted to use of acid.

The Zwolle field has produced more than 11,000,000 barrels of oil. About 650 wells have been drilled, of which about 270 were oil wells and the remainder dry holes. Daily field production is now about 2800 barrels daily, as compared with a daily production a year ago of 6500 barrels. The oil is of a very desirable grade, being 40 gravity and above.

The rapid decline of production in the first producing section has not been offset by intensive drilling in any part of the field. Considerable drilling remains to be done, but the risk is too great when compared with the average initial production of wells completed during the past year (dry holes included).

An unsteady gas production on a number of leases has led to a number of ingenious arrangements for utilizing the small amount of gas produced with the oil. Magnolia Petroleum Company has installed vapor-proof gun-barrel and storage tanks, and obtains gas for the engines by pulling it from the top of the gun-barrel or flow tank.

The attention of a number of operators is again focused on deep zone possibilities, but the limited amount of deep drilling in and near the field does not strongly support the theory that the source of the upper oil accumulation lies directly below the first production. The field has been an erratic but remarkable producer from the shallow cavities, and considerable deep drilling is to be expected.

Monroe, La.—The ban against use of acid in the Monroe gas field which was imposed over a month ago by the minerals division of the Louisiana Conservation Commission is still in effect.

At the time of the order halting use of chemicals in the gas field on complaint that the acid was injurious to some of the wells, it was stated the ban would be in effect until a hearing on the matter could be held. So far no hearing has been held. Several operators are prepared to use acid in the field if and when the ban is lifted.

Eight Completions Made In North Louisiana

Shreveport, La. — Four commercial wells, two small oil wells and two small gassers, and four wildcat failures comprised North Louisiana's completions list last week.

Small pumpers in the Bellevue shallow field, Bossier Parish, and in the Pine Island district, Caddo Parish, were the two oil wells. Small gassers were completed in Pine Island and in the Monroe gas field.

Wildcats in Bossier, Caddo and two in Red River Parish were the abandonments.

Completions last week in North Louisiana follow:

Company, Well and Location	Init. Prod. Bbls.	Depth
BOSSIER PARISH (Bellevue)—		
The Premier Investment Co., R. E. Wyche 17, 14-19n-11w	7	422
BOSSIER PARISH (Plain Dealing)—		
Plain Dealing Synd., S. H. Bolinger Lbr. Co. 1, ne sw 35-23n-13w	*	3207
CADDO PARISH (Pine Island)—		
Shreveport Oil Corp., Muslow B-3, nw sw 4-20n-15w	40	2162
The Leonard Co., Green 1, sw sw 8-20n-15w	¶½	845
CADDO PARISH (Reisor)—		
O. L. Hickman, Fee 1, nw nw 36-17n-15w	*	2758
OUACHITA PARISH (Monroe)—		
Inabnet & Pipes, D'Arbonne 1, sw sw 23-19n-3e	¶2	2195
RED RIVER PARISH—		
C. M. Cope, A. M. Thomas 1, nw se 34-13n-8w	*	2375
O. K. Oil Co., Franklin Realty Co. 1, se sw 32-11n-9w	*	1340

*Failures; †Junked; ¶Million cu. ft. gas.

Six New Tests Start In North Louisiana

Shreveport, La.—Six new locations were added to North Louisiana drilling reports last week, three of the new tests being wildcats.

In Claiborne Parish, on a 3000-acre block, J. K. Wadley of Texarkana has derrick up for W. W. Moreland 1, Section 2-22n-7w. It will probably be a 4500-foot test. In Caddo Parish, near Belcher, California-Louisiana Development Company has derrick up and rig on the ground for W. E. Glassell 1, SW SW 29-20n-14w.

In East Carroll Parish, on an 18,000-acre block, Century Oil & Drilling Corporation (M. V. Duncan et al) has derrick up for Olivedell Planting Company 1, 600 feet south and 300 feet west NEc irregular Section 56-21n-12e, a location chosen after extensive geological exploration and magnetometer work had reportedly found a pronounced "high." The test will go to 3000 feet. This block is six miles northeast of the East Carroll Parish (Floyd) gas field which has four gassers producing from the 2350-2400-foot level.

In the Urania district, La Salle Parish, which produces oil from the Claiborne-Wilcox contact at 1500 feet, Ten Graham is rigging for Urania Lumber Company 1, 300 feet north and 150 feet east SWc NW 18-10n-2e.

In the Union Parish part of the Monroe gas field two new locations were announced as follows: Carbons Consolidated, Fee 7, 990 feet south and 1980 feet west center 35-22n-3e, and the same company's Fee 6, SW NW 14-19n-5e, which has already spudded and is drilling below 1800 feet.

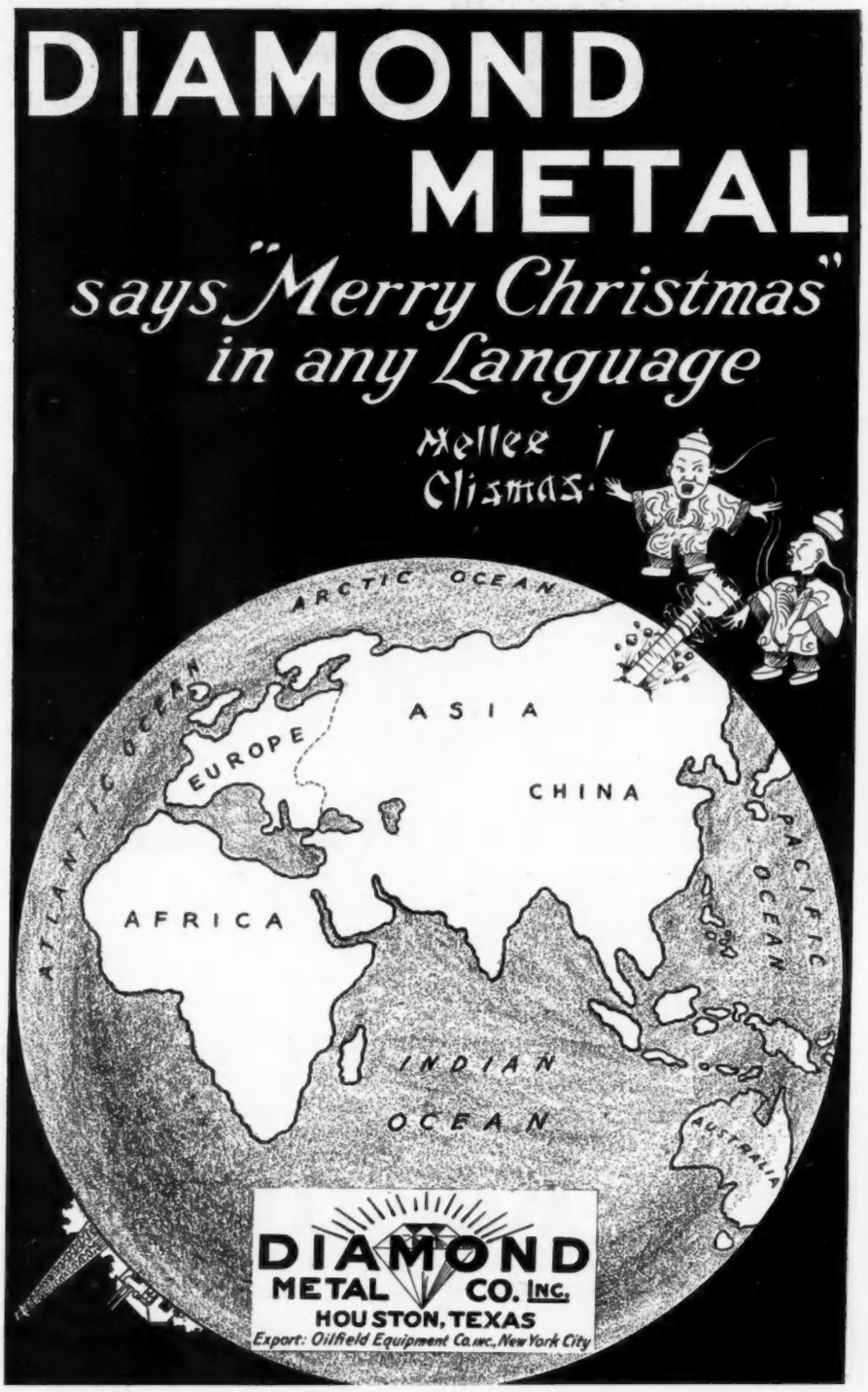
Two tests will be deepened. In the Sligo gas field, Woodley Petroleum Company is rigging up to deepen Harris 4, SW SE NE 14-17-12, from 1762 feet where it was completed in November, 1930, as a five million foot gasser.

Three New Wildcat Blocks in Tennessee

Memphis, Tenn.—Three new wildcat acreage blocks were reported assembled in southwest Tennessee where there are four tests already drilling and two others are arranging to spud.

Mike J. Kissick, who is drilling a test in Fayette County, announced the assembly of a second block of 4500 acres centering near Belmont church and carrying a drilling obligation to start a 3500-foot test within six months.

In Hardeman County, Kerr & An-



derson Drilling Company have assembled an 18,000-acre block centering in the town of Grand Junction and plan to spud by January 15. There is no contract depth but there is an agreement to penetrate the Devonian.

In Shelby County, one mile south and two miles east of Brunswick, Clarence Garrett et al have assembled a block and have derrick up for Gillespie 1.

Caddo Takes Lead in North Louisiana Work

Shreveport, La.—A recent one-mile northeast extension of the old Caddo field, Caddo Parish, near Mooringsport, has resulted in a flurry of drilling in that area. Last week there were seven tests drilling, one rigging up and two derricks up. Three tests are drilling in the shallow Blanchard gas field, Caddo Parish.

With drilling activity at a low ebb in both Zwolle and Converse, which for the last two years have been the most active fields in North Louisiana, this makes the old Caddo field the most active proven field in North Louisiana at the present time. The extension well, good for 100 barrels daily on the beam, was completed at 2100 feet.

New Rainbow City Pay Level Found; Taylor Sand Extended

El Dorado, Ark.—The newly discovered "Taylor" sand at 3360 feet in the old Rainbow City (Champagnolle) field, Union County, was extended in two directions last week by flowing wells, and the existence of another producing sand in the upper red bed series of the lower Cretaceous, was proved by a flowing well making oil of 33 gravity compared to oil of 29.9 in the 3360-foot level. The second new pay level is 3321 feet.

One fourth mile south of the second producer of the 3360-foot sand, H. L. Hunt, Incorporated's E. F. Gregory 11, 330 feet south and west NEc SE SE 10-17-14, is flowing 1550 barrels of clean oil daily through two-inch choke at 3321 feet, opening a new producing sand.

One fourth mile due south of the discovery well of the 3360-foot sand, H. L. Hunt, Incorporated's J. D. Gregory 3, 200 feet north and east SWc SE 10-17-14, is flowing 200 barrels of oil daily at 3359 feet.

One half mile northwest of the discovery well of the "Taylor sand" Skelly Oil Company's W. H. Perdue 6, center SE SE NW 10-17-14, is flowing 1275 barrels of clean oil daily through one-inch choke from 3359 feet.

An east offset to the discovery well of the Taylor sand, S. H. A. Oil Corporation's (Short and Hayes) J. W. Taylor 2, Section 10-17-14, which picked up a new sand at 3466 feet, is being put on the beam as a pumper.

Five new locations were announced for Rainbow City last week as follows: J. E Crosbie, Incorporated's W. E. Gregory 1, 330 feet south and east NWc NE 15-17-14, derrick up and moving in rig; H. L Hunt, Incorporated's E. F. Gregory 14, 330 feet south and west NEc SW SW 11-17-14, materials; E. F. Gregory 15, 330 feet north and west SEc SE SE 10-17-14, rigging; Lion Oil Refining Company, H. L. Rowland 7, 330 feet south and east NWc NE NE 15-17-14, derrick up; and S. H. A. Oil Corporation's J. W. Taylor 3, 330 feet south and west center 10-17-14, derrick up.

Besides the three flowing wells in Rainbow City there were two other completions in Smackover, one a salt water hole in the extreme northeast part of the original field in Ouachita County, and the other in Union County, pumping 35 barrels of oil and 1000 barrels of salt water daily.

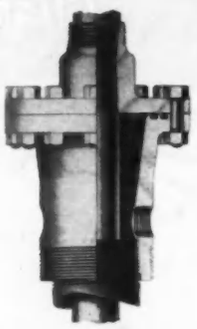
Four other locations were announced in Arkansas last week besides the five new tests for Rainbow City.

T. J. Gaughan et al of Camden, Arkansas, who are standardizing M. Bragg 1, NW SW 30-13-17, Ouachita County, in Nacatosh sand at 1386-94 feet, are rigging for a 630-foot offset, Cartier 1, 330 feet south and east NWc SE SE 25-13-18. These operators have a 4300-acre block.

In the Garland City field, Miller County, Thorn Tree Oil Corporation has derrick up for E. H. Beck 3, 330 feet south and east NWc SW SW 34-15-26.

Two wildcat tests were started in Union County. E. R. Henderson, who has had interesting shows in Nacatosh at the 2100-foot level in two previous tests in the same area, has spudded Vines 2, NWc SW SE 29-18-14, and is drilling at 950 feet. C. H. Murphy et al have derrick up and are moving in rig for Union Sawmill Company 1, 330 feet north and west SE NW SE 29-18-11.

Mrs. R. K. Jones' J. Davis 1, NW NW 28-16-14, a wildcat in Union County, which recently began sidetracking at 2370 feet, after an unsuccessful fishing job following a reported oil sand logged at 2765



REGAN TUBING HEAD

Supplied in five distinct types for all conditions and pressures. Three different methods of packing between flanges are available.

1. **Hydraulic Packing**
2. **Metal Ring Packing**
3. **REGAN'S Improved DOUBLE-SEAL TONGUE AND GROOVE**

Catalogue describing these and other Regan Products will be mailed on request.

Regan
Forge & Engineering Co.

P. O. Box 1058 **San Pedro, Calif.**

NEW YORK OFFICE
17 Battery Place
Geo. R. Woods, Mgr.

MID-CONTINENT OFFICE
Bettis Sales Co.
Houston, Texas

feet, last week reported coring a sand showing oil at 2758 feet in new hole. This test is five miles southeast of Smackover production and two miles northwest of Rainbow City production. Casing was being set in the new hole without running formation tester.

Completions last week in Arkansas follow:

Company, Well and Location	Init. Prod. Bbls.	Depth
OUACHITA COUNTY (Smackover)—		
L. L. McDonald, J. A. Robertson 1, ne nw 25-15-16	*	2601
UNION COUNTY (Smackover)—		
Lion O.R. Co., Flenniken A-10, sw ne 10-16-15	35	2408
UNION COUNTY (Rainbow City)—		
H. L. Hunt, Inc., E. F. Gregory 11, nec se se 10-17-14	1550	3321
J. D. Gregory 3, sw se 10-17-14	200	3359
Skelly Oil Co., W. H. Perdue 6, se se nw 10-17-14	1275	3359

*Failures; †Junked; ¶Million cu. ft. gas.

Two Arkansas Drilling Permits

El Dorado, Ark.—Two drilling permits were authorized last week by the Arkansas Board of Conservation, both for the Garland City field, Miller County. The two permits are: Thorn Tree Oil Corporation's E. H. Beck 2, 330 feet from the south line and 330 feet from east line SE SW SW 34-15-26; and E. H. Beck 3, 330 feet from the west line and 330 feet from the north line, NW SW SW 34-15-26.

El Dorado, Ark.—Five flowing wells completed in new sands of the red bed series of the lower Cretaceous in the Rainbow City (Champagnolle) field, Union County, Arkansas, caused a gain last week of 1,850 barrels in the daily runs of the Rainbow City and El Dorado fields which mounted to 8,500 barrels. This increased production caused Arkansas' average for last week to rise 1,850 barrels to 32,500 barrels. The allowable for Arkansas for December is 29,000 barrels.

Twenty-Five Louisiana Drilling Permits Issued

Shreveport, La.—Twenty-five drilling permits were authorized last week by the minerals division, Louisiana Conservation Commission. Six of the new tests were for North Louisiana parishes as follows: Caddo, two; Ouachita, three; and Red River, one.

The 19 for South Louisiana were divided among the following parishes: Acadia, eight, all issued to Superior Oil Producing Company of Houston; Calcasieu, two; Iberia, one; Jefferson Davis, one; Plaquemines, one; St. Landry, five, all issued to Superior Oil Producing Company; and Terrebonne, one.

New Starts and Extensions Feature New Mexico Work

Hobbs, New Mexico.—Seven new locations for Lea County were announced during the past week, including five by Continental Oil Company and The California Company in taking care of offsets to their joint properties in the Eunice and Cooper fields. Important extensions registered by outpost tests in the South Jal and North Lea districts and completion of small wells in the Eunice and Cooper fields on locations considered likely to yield big wells offered a contrast in developments during the week.

A new wildcat project for the eastern portion of the county was included in the group of locations. Ryan Consolidated Petroleum Corporation is to explore a Government permit in drilling its Acree 1, C NE NW 35-20s-32e, situated two miles southeast of The Texas Company's Anna C. Moore 1, C NW SE 21-20s-32e, which is rigging up. Development on the southeast edge of the North Jal field is to be revived through Southern Petroleum Exploration, Inc., having made location for Ascarate 2-A, C SE NW 24-25s-37e. In the event of production four additional tests will be required.

Preliminary production test given Empire Gas & Fuel Company's R. L. Dyer 1, NEc SW SE 31-25s-37e, located about one half mile east and north of nearest production in the South Jal area, indicated a daily flow of from 700 to 1000 barrels of oil and 2,000,000 cubic feet of gas. Formation tester was used on saturated lime at 3223-3252 feet. The hole was carried to a sub sea depth of 261 feet. Seven-inch casing has been cemented to complete.

Irregular production performance was registered by the north and south offsets to the largest oil well in the south portion of the Cooper field. Amerada Petroleum Corporation's N. Everett 1, C NE NW 35-24s-36e, gauged 295 barrels of oil and 350,000 cubic feet of gas daily through open 2½-inch tubing from lime at 3425-3469 feet. Packer was installed on tubing at 3434 feet to shut off 22,000,000 cubic feet of gas registered on previous tests. It is a north offset to The Texas Company's Everett 1, which was completed several weeks previous rated at between 10,000 and 15,000 barrels of oil daily from lime at 3432-3443 feet, or 155 feet below sea level. The north offset was carried to a sub sea depth of 170 feet. Empire Gas & Fuel Company's N. Everett 1, C NE SW 35-24s-36e, a south offset to the big well, gauged 52 barrels hourly with considerable gas on open tubing test at a depth of 3445 feet, or 168 feet below sea level.

Humble Oil & Refining Company's J. L. Coates 1, C NW NE 10-24s-36e, situated two miles north of production in the Cooper area, threatens to duplicate the company's experience and expense had in drilling the first prolific well in the Hobbs field. Gas blowouts and fire branded the company's D. A. Bowers 1, Hobbs field, as the most costly well in Lea County, and Coates 1 is becoming a rival through having cost about $200,000 in trying to drill heavy gas production and carbon-dioxide gas at 3355 feet.

Trouble began during the first week in October. About 70 feet of drill pipe remaining in the hole is reported to have been pulled to the surface, and froze in place because of the carbon-dioxide gas while derrick was being stripped of crown block preparatory to allowing the well to blow open to remove the junk. An effort has been made to circulate with hot oil as a means of thawing out the drill pipe.

Three of the new locations ordered drilled by Continental-California interests are for the north portion of the Cooper field. D. L. Vaughan 1-A-14 is located at C SW SW 14-24s-36e, and Vaughan 1-B-15 is a west offset, while R. L. Gates 2-A-23 is a south offset to the former.

Completions scored last week by the Continental-California interests on the east and west edges of the Eunice field proved to be above the average on initial gauges. A. E. Meyer 1-B-9, C NE SW 9-21s-36e, widened production one location to the east with a natural flow of 37 barrels of oil per hour through three quarter-inch choke on 2½-inch tubing lowered to within five feet of the bottom of the hole. The well was drilled to 3900 feet. M. Lockhart 2-A-18, C SW SE 18-21s-36e, gauged 44 barrels hourly, with gas estimated at 1,400,000 cubic feet daily, through three quarter-inch choke at a total depth of 3924 feet. Continental-California interests made location for A. E. Meyer 1-A-18, C NE NE 18-21s-36e, and for A. E. Meyer 3-A-8, C SW SW 8-21s-36e.

Atlantic Oil Producing Company's State 1-F, C SW SW 29-21s-36e, an outpost in the southeast portion of the Eunice field, failed to show oil when tested at 3932 feet, but responded to treatment with 2000 gallons of acid solution with a yield of 10 barrels of oil per hour on swabbing test. The field has again escaped its unusual reputation of having no dry holes in its immediate area. The

Texas Company's J. M. Rector 2, a west offset to the above small producer, has been completed flowing 268 barrels of oil in five hours natural from saturated lime at 3897-3941 feet. It was drilled to a sub sea depth of 337 feet, while the offset quit at 324 feet below sea level. Tide Water Oil Company et al's Coleman 4, C SE NE 17-21s-36e, reported last week as a new producer in lime at 3943 feet, or 316 feet below sea level, developed 40 percent sulphur water in registering an initial flow rated at 1500 barrels daily. It has since been plugged back to 3933 feet.

The Texas Company has two wells awaiting results of acid treatment in the north portion of the Lea field, and both showed sulphur water in drilling to their present depth. Bulah Lynch 4-A, C SE NE 34-20s-34e, showed water at 3739-3748 feet, and treated with 1000 gallons of chemicals after drilling to 3751 feet, or 22 feet below sea level. The company's L. E. Elliott 1, C NE NE 22-20s-34e, situated about midway the Lea field and J. S. Lea 1, a wildcat producer, cemented seven-inch pipe at 3690 feet to shut off upper water, and has treated the lime pay from the latter point to 3710 feet with acid.

Allowable production of the Hobbs field was reduced from 31,014 to 29,938 barrels daily during the last proration period for December, according to C. G. Staley, umpire, while top allowable of wells in other Lea County fields was cut to 149 barrels daily.

Eddy County

Artesia, N. M.—Four tests started this week in Eddy County. On the Black River dome structure, Pecos Valley Drilling Company is drilling at 560 feet in State 1, NEc NW NW 32-24s-37e, a first report. In the Artesia district, Flynn, Welch and Yates released location for State 71, CSW NE 10-19s-28e. Two started in the Maljamar pool, both of which are rigging up with cable tools, Skelly Oil Company's Dow 1, CSW SE 15-17s-31e, and Leonard et al's Nunler 1, CNW SW 27-16s-30e.

A Bear for Wear

The tremendous vise-like grip never lets go until the tapered pin is driven out—and that's why Grizzly Protectors give better protection to your pipe. Easy to install—easy to remove.

Fully Covered by Basic Patents
E. M. SMITH COMPANY
600-650 So. Clarence St., Los Angeles, Calif.
Distributors
T. T. WORD SUPPLY COMPANY, Inc., Houston
CONTINENTAL-EMSCO COMPANY, Inc.
30 Rockefeller Plaza, New York

GRIZZLY
DRILL PIPE PROTECTORS

Mountain States Completions

MONTANA

Company, Well and Location	Init. Prod. Bbls.	Depth
GLACIER COUNTY (Cut Bank field)—		
C. P. Castle, State 1, sw sw 36-35n-6w	150	2800
Nadeau Bros., Farmers State Bank 1, cnw ne 17-33n-5w	40	2950
R. C. Tarrant, Haglund, Jr., 5, csw ne 13-34n-6w	135	2819
CARBON COUNTY—		
Ohio Oil Co., Agnes Maddox 14, nw nw 10-7s-21e	352	5958

WYOMING

ALBANY COUNTY—		
California Co., Holst 1, ne se se 13-17n-77w	60	3175
CONVERSE COUNTY—		
E. B. Jones, Teakle 1, se se se 17-32n-69w	¶	565

COLORADO

EL PASO COUNTY—		
Utemoor Syndicate, Carson 2, nw ne ne 10-16-66	*	2547

NEW MEXICO

DONA ANA COUNTY—		
Viking Oil Co., State 3, sw nw 26-23s-5e	*	900
GUADALUPE COUNTY—		
New Mexico Producing & Refining Co., McMullen 1, sw 24-5n-16e	*	4718
LEA COUNTY (Cooper Field)—		
Amerada Pet. Corp., N. Everett 1, c ne nw 35-24s-36e	295	3469
Empire Gas & Fuel Co., N. Everett 1, c ne sw 35-24s-36e	1250	3445
LEA COUNTY (Eunice Field)—		
Continental Oil Co.-California Co., M. Lockhart 2-A-18, c sw se 18-21s-36e	2000	3924
A. E. Meyer 1-B-9, c ne sw 9-21s-36e	1220	3900
The Texas Co., J. M. Rector 2, c se se 30-21s-36e	1340	3941

*Failures; †Junked; ¶Million cu. ft. gas.

Northern Montana Fields Will Not Be Prorated

Great Falls, Mont.—The Montana Petroleum Conservation Board again rejected proposals to prorate crude oil production in the northern fields of this state at a meeting of the board called here Wednesday.

"There is an actual over production in north Montana and runs are in excess of the allowable under federal allotments, but so long as we can sustain the price the board feels there is no necessity for proration. The price can only be sustained through orderly development," said E. B. (Hardrock) Coolidge, chairman of the board after it had concluded its all day session.

Cut Bank crude is bringing a price of $1.45 per barrel in an instant market. Pondera crude is selling at $1.25 per barrel. Kevin-Sunburst producers are voluntarily storing or prorating between 1000-1500 barrels of crude oil daily in an effort to sustain that field's price of $1.35 per barrel.

International Refining Company, subsidiary of The Texas Company, and Toronto Pipeline Company, subsidiary of British-American Oil Company, Winnepeg, are storing all oil in excess of refinery demands. The two companies are major buyers in the Cut Bank field, and operate the two pipe line outlets to Canadian and Sunburst, Montana, refineries.

Ohio Oil Company is purchasing and exporting in excess of 1500 barrels daily of crude to Canada. The International refinery at Sunburst and the Big West refinery at Kevin are running at capacity. Home Oil & Refining Company of Great Falls will soon be in the market for 1000 barrels daily for use in its new cracking plant, which is scheduled for completion by March 15.

In attendance at the board meeting were Chairman Coolidge, R. P. Jackson, secretary, both of Great Falls; L. B. O'Neill of Cut Bank; and O. M. Webb of Sunburst.

Big Horn County

Lovell, Wyo.—Sidney H. Keoughan and Peter Evanoff are drilling out plug with the 9⅝-inch casing set at 1550 feet preparatory to saving Griffin 1, Lot 60, NE 4-55n-97w, which proved closure to the north fault block area of the Garland Dome oil field, Big Horn County, northern Wyoming, for a gas well. Well will make 10,000,000 cubic feet of gas daily, observers estimate.

In the Byron field adjoining Garland Dome, Ohio Oil Company is drilling at 2627 feet in its Wm. Hoskins 1, SW SW 14-56n-97w.

Two Completions and One Start at Cut Bank

Cut Bank, Mont.—Two average Cut Bank oil wells were completed and one test started this week. This reduced operations to 12 drilling wells in the Glacier County field, where operators are closing down drilling campaigns until warmer weather.

R. C. Tarrant's Miller 3, SEc NE NE 24-34n-6w, was a disappointment when it swabbed only 75 barrels initial. The well is a near line location and an offset to the Tarrant-Long Miller well, which was completed nearly two years ago for 750 barrels initial and started the Cut Bank boom. Miller 3 logged production in the lower Cut Bank sand between 2820-2832 feet and drilled to 2856 feet.

Consolidated Gas Company's Tribal 2, Lot 6, Section 34-35n-6w, had an initial production of 75 barrels on the pump from 2946-65 feet. Hole bottoms at 2970 feet.

A townshite well started this week. Wickstrand and Walgren are moving in material for Simero 1, Lot 5, Block 17, original Cut Bank townsite, Section 12-33n-6w.

Nadeau Brothers' Farmers State Bank 1, C NW NE 17-33n-5w, had 200 feet of water in the hole from the Moulton sand, normally a gas horizon, encountered between 2780-85 feet, and were cementing the 8¼-inch casing at that depth for water shutoff.

Completion of C. P. Castle's State 1, SW SW 36-35n-6w, was delayed by fishing job when pipe froze at 2723 feet with total depth of hole at 2741 feet. The test had an estimated flow of 4,000,000 cubic feet of gas in the Moulton sand logged between 2715-25 feet.

Activity in the Edison Field Is Increasing

Los Angeles.—The Edison field, in Kern County, continues to attract attention until there now are eight wells actively drilling, six rigs up and two wells are to start at once. There are two sands in the field, but the lower zone seems to be the most attractive, although the most elusive, or uncertain.

A. T. Jergins Trust recently completed Hershey 1 in Section 14-30-29 at 1560 feet for 200 barrels of 17.3 gravity oil, cut five percent. String of 6¼-inch pipe, including 440 feet of perforated, was landed at 1560 feet. Well is on the pump.

Monterey Exploration Company's Duff 8 is drilling at 3310 feet in sandy shale and is after the deeper pay. Shell Oil Company's Nichols 1 has reached 2051 feet and has cemented 11¾-inch casing at 1790 feet. This is another test seeking the lower zone. Same company's Osborne 1, Section 15-30-29, is drilling in hard sand at 3384 feet.

The Texas Company's Seale 4-25, Section 4-30-29, is drilling in oil sand at 3060 feet and last casing cemented was 11⅝-inch at 406 feet.

General Petroleum Corporation and Seeple Oil Company are each starting a new well in the field.

Fifteen Wells Are Drilling in Mesa Field

Los Angeles.—Fifteen wells are drilling at the Mesa in Santa Barbara County and two rigs are up ready to start. During the past week Rio Grande Oil Company completed Perkins 2 for 1275 barrels of 19.4 gravity clean oil with bottom at 2045 feet. The tubing pressure was 30 pounds with 520 pounds on the tubing.

Producers at the Mesa are not satisfied with the allotment set for the field and an appeal has been filed with the Central Committee. The same procedure is followed as to the Mesa field as in other fields in the state and it is doubted if any relief can be extended.

The field has no pipe line, the oil is known as a fuel oil grade, with a very small gasoline content, and the disposition has been to treat all fields alike.

The wells are shallow, comparatively speaking and the gas is not sufficiently strong to make the flowing life over a few weeks.

Belridge Test to Plug Back and Test Again

Los Angeles.—Belridge Oil Company's deep test No. 16-35, at Belridge in Kern County, which produced 7500 barrels of salt water at 8905 feet, has found that water is coming from bottom of hole and will plug off for another test. String of 8⅝-inch casing is cemented at 8385 feet.

Casa Mira Oil Company's Theta 1-A, Section 29-28-20, with bottom at 6504 feet, showed only water and a color of oil on a bailing test. No tubing was in hole, and a full string of 4½-inch pipe landed on bottom, was cemented through perforations at 6504 feet. The string included 1590 feet of perforated. Bailing will continue for several days to insure a thorough test. A formation tester indicated no water from cementing point to bottom.

The action of Continental Oil Company's Result 5 in Section 36-27-20, in showing for at least 9000 barrels of 36.2 gravity oil and 40,000,000 plus cubic feet of gas with bottom at 8395 feet, will serve to increase drilling for the deep zone in the North Belridge field. This well has been beaned back to 666 barrels a day in keeping with allotment requirements and the pressure built up to 3100 pounds on

DO THE JOB BETTER, QUICKER—

—with "TOLEDOS."

"TOLEDO" Pipe Reamers cut rapidly, feed easily and smoothly. Light, compact and easy to operate. Natural hand grip. Made in 2 models. Jr. Reamer capacity ⅛" to 2" pipe. Ratchet Reamer capacity ⅜" to 3" pipe.

"TOLEDO" Open-Side Pipe Vises are vises of exceptional quality. Malleable iron frame. Heat treated steel jaws. Hardened vise screw. Long handle gives ample leverage. Any part replaced at small cost. Made in 3 sizes. No. 00, ⅛" to 1½"; No. 0, ⅛" to 2½"; No. 3, ⅛" to 4½".

See Pages 496-497 Composite Catalog for Complete Line

The TOLEDO PIPE THREADING MACHINE CO. Toledo, Ohio

NEW YORK OFFICE & DISPLAY
72 LAFAYETTE STREET

Officials of California Oil & Gas Association

C. S. JONES
President

D. S. KILGOUR
Assistant Secretary

the tubing and 3300 pounds on the casing.

Standard Oil Company of California's McPhail 1-A now is drilling at 5235 feet in brown shale and Union Oil Company's Belridge 18 is milling on iron at 8235 feet with old bottom at 8523 feet.

Belridge Oil Company is building rig for No. 22-35 in Section 35-27-20.

California Oil Men Hold Annual Party

Los Angeles.—Oil men of California gathered December 19 in Los Angeles at the Biltmore Hotel for their annual frolic under the auspices of the California Oil & Gas Association. The Wildcats as usual came to the front with another of their "take off" on a phase of the oil industry. This time the play was entitled "An Ode to a Code." It depicts oil conditions on the super-civilized planet Mars.

New officers, recently elected, were seated at the speakers table and was their first public appearance.

Slightly more than 1400 were in attendance, making it the largest attended meeting of oil men ever held in Los Angeles. A sentiment of cheerfulness prevaded the gathering to a greater extent than for several years and the Wildcat presentation was appreciated to a great degree. There were no prepared talks and the evening was given over to good cheer and fellowship.

Mountain View Field Has 17 Tests Drilling

Los Angeles.—Seventeen wells are drilling at Mountain View in Kern County near Bakersfield and three rigs are up ready to start. New wells in this field usually range from 500 to 2500 barrels but the field is erratic in that some wells are better than others according to location.

As the week closed, Hancock Oil Company's Miller 2 in Section 14-30-28, was being watched closely as it had reached 5361 feet in oil sand and is standing cemented with 8⅝-inch casing at 5310 feet. The oil sand is reported to be exceptionally well saturated.

Mohawk Petroleum Company's Clendenen 3 is drilling in oil sand at 5760 feet. Barnsdall Oil Company's Morris 2 is drilling in oil sand at 5230 feet and formation tester is being run. Barnsdall's Young 1 is drilling at 6270 feet in brown shale.

A. T. Jergins Trust's Wright-Bloemer 2 is drilling in shale and oil sand at 4923 feet, with 13⅜-inch pipe set at 1217 feet.

Union Oil Company's Kernco 1-B is preparing to spud. Kernco 3 tested wet at 5521 feet and is idle. Kernco 4 is drilling in sandy shale at 4960 feet. Wible 3, in Section 23-30-28, is grading at location.

Wood Callihan Oil Company's National Oil 3 in Section 30-30-29 is drilling in shale at 5315 feet.

New Gas Field May Be Opened Near Sacramento

Los Angeles.—A new gas field within 50 miles of Sacramento in Northern California may be opened by Buttes Oilfields' No. 2 at Marysville Buttes in Sutter County, which has reached 6770 feet after passing through about 2700 feet of volcanics or rather andesite, a formation hard to drill.

This company first drilled No. 1 test to 2727 feet and the well was good for 3,425,000 cubic feet of gas. It was decided to drill a second test 750 feet of No. 1. The second test has been drilling more than a year and gas from the first test has been used to fire the boilers, but recently the casing partially collapsed in No. 1 and the gas production is barely sufficient to supply the three boilers. It is expected that No. 1 will be worked over after No. 2 has been completed.

The second test passed out of the andecite formation at 4982 feet. The stratum, until 5929 feet was reached, showed some gas. At this point, the drill again hit andesite, until a total of about 2700 feet of this formation was penetrated. The well now is drilling in very hard sand and shale showing gas, and with a pressure that requires 90-pound mud to control. Weighting material is being added to the mud.

The corporation has a blocked community lease of 46,251 acres. The corporation also holds under lease 17,200 acres near Chino in Butte and Tehama Counties and also has under lease 8700 acres near Corning in Tehama County.

Although corporation officials hope for a commercial oil well, they will not be badly disappointed if they prove a new gas field, due to the increase in the use of natural gas in California, and due to the favorable location nearer to the points of natural gas consumption in Northern California. Sacramento is only 50 miles from the well and is a thriving city as well as the capital of the state.

Court Holds Code Not Enforceable Within State

Los Angeles.—Superior Judge Wilson of Los Angeles December 13 held that the NRA Code of Fair Competition for the Oil Industry is not enforceable in California, denying the power of the federal government to interfere in the internal affairs of the state.

The decision was rendered in a case where a unit holder demanded the removal of trustees of Bell View Oil Syndicate, charging the trustees had produced the Syndicate wells in excess of the allotment under the code, and for that reason oil purchasing companies are refusing to buy said crude oil production.

Judge Wilson held that the constitution

provided only for regulation of interstate and foreign commerce by Congress, and that such regulations could not commence until it had actually started its passage to another state.

In that the decision mentioned is by a state court, it is felt that the decision yet to be rendered by the federal district court in Los Angeles in the Wilshire case is of much greater importance, since the entire subject matter of the code as to alloting oil production is under consideration.

In California, the allotment of oil to be produced is fixed by a committee acting for the producers under code regulations, and the umpire is an agent of this committee. The committee adopts the allotment as a whole as promulgated by federal authorities.

Under the marketing agency plan in force in California, which is an approved part of the code, members of the agency are not permitted to purchase crude oil from any producer who produces oil in excess of his allotment.

It is expected the verdict rendered in Superior Court will be appealed. The federal government had no representative active in the case.

North Belridge Well Flows 8,000 Barrels

Los Angeles.—An 8000-barrel well at Belridge the past week caused the total initial production of the 11 California completions for the week to jump to 13,270 barrels. The new Belridge well in the deep sand is flowing 36.2 gravity oil and to exceed 40,000,000 cubic feet of gas, making of it the best and largest producer in California for several years.

Other completions for the week were routine and without special incident. Western Gulf Oil Company completed two new ones at Fruitvale, good for 500 barrels each. Tri Co Oil & Gas Company's Magee & Stone 2 in Kern County, Section 3-25-23, was recompleted for 3,000,000 cubic feet of gas.

Company, Well and Location	Init. Prod. Bbls.	Depth
DOMINGUEZ—		
Shell, Reyes 60	1000	4904
Union, Callender 36	590	5752
LONG BEACH—		
J. H. Cochran, No. 9	200	4205
Commercial Dr. Co. No. 1	440	5625
Rafair Oil Co., No. 1	90	3990
BELRIDGE—		
Continental, Result 5	8000	8395
EDSON—		
A. T. Jergins, tr, Hershey 1	200	1560
FRUITVALE—		
Western Gulf, K.C.L. B-15	500	3935
Price & S. 4	500	3668
MOUNT POSO—		
Pongratz Pet. Co., Tavis 4	500	1880
MESA—		
Rio Grande Oil Co., Perkins 2	1250	2045
FRESNO COUNTY—		
Western Gulf, S.P.L. 2	*	7379
PIRU—		
Piru Oil Co., Holser 1	*	3545

*Failures; †Junked; ¶Million cu. ft. gas.

Acid Treatment Helps Michigan Wildcat Test

Mt. Pleasant, Mich.—Acid treatment on Atha Oil Company's Moran 1, 13n-1e,28, Midland County, a wildcat test completed in Dundee lime at 3481 feet on October 9, resulted in a flow of 280 barrels the first 24 hours and 125 barrels the third day. It had pumped from four to seven barrels daily on tests before treatment.

Located about three miles east of production in the Porter district, the test may have opened a new field in Midland County. Atha Oil Company announced two new locations in the same township of the wildcat while Daily Crude Oil Company also made a location.

McClanahan Oil Company's E. Breu 2, Midland County, 13n-1w, 20, may be produced from the Traverse formation at 2957 feet. It developed heavy gas and oil flow from that horizon although originally charted for a Dundee test. Flowing from the Traverse the well caught fire and caused damages estimated around $2000 on december 15.

Two new wildcat tests are scheduled for Ogemaw County, although drilling permits as yet have not been issued. Both are in Churchill township just north of West Branch township, where there is considerable development at the present time. Thompson Brothers and D. F. Jones have made the wildcat locations.

Completions for the wek follow:

Company, Well and Location	Init. Prod. Bbls.	Depth
MIDLAND COUNTY—		
Pure Oil Co.'s Wyant 8, 13n-1w, ne nw sw-16	100	3425
Bond-Root 3, 13n-2w, n-ne ne-3	670	3434
MECOSTA COUNTY—		
Gordon Oil Co.'s Engelman 1, 15n-8w, c-sw nw-9	*	1530
GRATIOT COUNTY—		
McClanahan Oil Co.'s Sullivan 1, 12n-3w, ne sw nw-33	*	3334
Ithaca Oil & Gas Co.'s Thum 1, 9n-1w, nw se se-19	*	2600

*Failures; †Junked; ¶Million cu. ft. gas.

Eastern Fields Completions

PENNSYLVANIA

Company, Well and Location	Init. Prod. Bbls.	Depth
WASHINGTON COUNTY—		
Geo. Bungard & Co., Phillips 1	1	....
Wasco Fuel Co., McNary 3	¶	....

WEST VIRGINIA

Company, Well and Location	Init. Prod. Bbls.	Depth
BOONE COUNTY—		
Pure Oil Co., Pocotello Coal Co. 1	¶	2962
Hope Const. & Refg., Federal Coal Co. 54	¶	3463
CALHOUN COUNTY—		
Richter Otil Co., B. S. Raybuck 8	15	2002
Jarvis-Hamilton, Jarvis Hrs. 1	2	2072
GILMER COUNTY—		
McCall Drilling Co., G. W. Wigner & Co. 1	¶	2652
CABELL COUNTY—		
John Kingery & Co., Rosa Midkiff 1	¶	1590
ROANE COUNTY—		
United FG Co., T. Ferrell 4	¶	2052
O. G. Epling, L. P. Starr 1	¶	2216
RITCHIE COUNTY—		
Bachelor-Coghill, Inc., J. L. McCullough 9	35	1935
Glen McBurney & Co., G. H. Darnell 2	15	1930
Cario Oil Co., F. H. Markey 1	*	....
L. P. Bickel, Morris Bros. 3	¶	1837
WIRT COUNTY—		
R. R. Waggoner & Co., James Ferre 1	¶	2022

SOUTHEASTERN OHIO

Company, Well and Location	Init. Prod. Bbls.	Depth
HOCKING COUNTY—		
Kachelmacher & Co., Geo. O'Neill 1	*	1081
MORGAN COUNTY—		
Carpenter & Glazier, O. M. Lovell & Co. 16	*	188
D. T. Orndorff, O. M. Lovell & Co. 13	2	1434
Charles Yarnell, Mosier & Co. 30	2	577
Harry Anderson, Fitch & Co. 3	¶	229
PERRY COUNTY—		
Mid East Gas Co., Beard 1	25	....
WASHINGTON COUNTY—		
Frank Creighton & Co., E. Ludington 2	¶	1542
T. J. Hamilton & Co., Thomas Payton 1	*	1600
Hill & Co., S. J. Waddle 7	¶	1588
Mike Stoffel, L. E. Stoffel 2	¶	....
Wall Harris, P. A. Dille 2	¶	937

NORTHWESTERN OHIO

Company, Well and Location	Init. Prod. Bbls.	Depth
HARDIN COUNTY—		
Kenton O&G Co., Ella Dreuchel 1	*	1367

CENTRAL OHIO

Company, Well and Location	Init. Prod. Bbls.	Depth
ASHLAND COUNTY—		
Ohio FG Co., Tully Scott 1	¶	2991
ATHENS COUNTY—		
Stewart Bros., Grace Blackwood 3	*	1027
CUYAHOGA COUNTY—		
Edward Obermiller, Reuben Berenek 1	¶	2316
MEDINA COUNTY—		
Ohio FG Co., George Buffham 1	*	3087
FAIRFIELD COUNTY—		
City. Nat. Gas. Works, M. E. Bowman & Co 2	¶	2192
PERRY COUNTY—		
Mid-East Gas Co., John W. Grant 2	97	3144
Wehrle Bros., Alma Board 1	¶	2777
LICKING COUNTY—		
Strickler & Armbruster, Homer L. Jones 4	*	567
Wehrle Gas Co., Carl Richey 2	*	1460
Everette Gas Co., Felix Claypool 6	30	2438
MEIGS COUNTY—		
Ohio FG Co., James S. Titus 2	¶	1004
H. B. Pickett 2	¶	1117
New Southern O&G, Wm. J. Krider 10	4	1811
Houston & Co., Jesse H. Gandee 1	¶	1960

INDIANA FIELDS

Company, Well and Location	Init. Prod. Bbls.	Depth
DAVIESS COUNTY—		
Indiana Sw. Gas Corp., Henerettie Goslin 2	¶	687
GIBSON COUNTY—		
Midwest Dev. Corp., Henry Erdell 1	¶	....
KNOX COUNTY—		
Mead Oil Co., K. M. Bond 1	¶	595
PIKE COUNTY—		
A. F. Davis, Frank Aurand 2	¶	....
POSEY COUNTY—		
L. R. Henley, Laurence Luigs 2	50	1295
SPENCER COUNTY—		
I. A. Polhamus, William Grass 5	30	....
T. F. Seitz, W. F. & G. A. Grass 1	20	....
VANDERBURG COUNTY—		
United Oil Co., E. & A. Schmitt 1	*	1142
Drake & Moffett, J. & C. Fridy 1	*	1004
John L. Drake, John Effinger 7	100	....
WASHINGTON COUNTY—		
A. B. Bement, John S. Spangler 1	*	....

*Failures; †Junked; ¶Million cu. ft. gas.

Drilling Reports on Important Wildcats

KANSAS

BARTON COUNTY — Atlantic Oil Co.'s Vaniman 1, csw ne 15-20s-12w, set 6-in liner 4680 ft, 2600 ft oih 4670-80 ft, cored 4680-81 ft, recovered 8-in csg. Murphin & Downing's Lanterman 1, nw se 15-19s-11w, set 5-in liner 3332 ft, so 3332-36 ft, so 3352-55 ft, 2800 ft oih, no test. Treleaven & Brimm et al's Haas 1, sw sw sw 30-18s-15w, ur 10-in csg 2390 ft. Darby Petroleum Co.'s Jatrus 1, nw se ne 16-16s-12w, set 8-in csg 3034 ft, co. Lario Oil & Gas Co. et al's Nuss 1, nw sw sw 11-16s-14w, lcn. D. I. Hall et al's Arnold 1, se sw 19-18s-15w, rig. Wolf Creek's Kraft 1, sw sw sw 26-16s-11w, cellar.

BUTLER COUNTY—Gaines et al's McKinley 1-A, ne sw 19-29s-4e, td 1950 ft, 1000 gals acid and no test.

CLAY COUNTY—Seidel Brothers' Younker 1, cs½ se nw 21-9s-4e, sd 1400 ft.

COWLEY COUNTY—Lassen's Ferguson 1, se nw 21-30s-8e, dr 2152 ft. Ben Gralapp's Ku-Kuk 1, sw nw 6-33s-4e, set 8-in csg 2023 ft, dr 2050 ft.

DICKINSON COUNTY — Dutch Oil Co.'s Phillips 1, cne nw 15-15s-1e, ur 8-in csg 2495 ft.

GREENWOOD COUNTY—Kite et al's Jamison 1, sw se ne 30-26s-13e, sd 525 ft.

HARVEY COUNTY—Imo Oil & Gas Co.'s Sperling 1, se ne ne 23-22s-2w, run 6-in csg 2948 ft. Connell et al's Roth 1, sw sw sw 16-22s-2w, spd and sd. Cameron, Derby & Trees' Brainard 1, sw se nw 19-24s-2e, ru.

KINGMAN COUNTY—Sam Jarvis et al's Morrisse 1, cse ne 23-30s-10w, rig.

McPHERSON COUNTY—Roth, Farrout et al's Bestwater 1, se sw se 23-20s-1w, ur 8-in csg 3005 ft. C. W. Lamer et al's Rolander 1, ne ne nw 8-18s-2w, set 6-in csg 3080 ft and sd. Lario Oil & Gas Co.'s Schrag 1, nw se sw 22-19s-4w, dr 1615 ft. Stafford et al's Krehbiel 1, nw se 27-21s-3w (owdd), co 2080 ft. Lario Oil & Gas Co.'s Base 1, sw sw sw 22-20s-2w, br.

NESS COUNTY—Texas Co. & Gypsy Oil Co.'s Goodman 1, csw sw 21-19s-23w, dr 3790 ft.

OSBORNE COUNTY—Carmen & Hershey's Fitz 1, cne ne 9-10s-14w, hfw 3675-80 ft, will run 6-in csg.

PRATT COUNTY—Atlantic Oil Co.'s Prentice 1, cse nw 18-28s-14w, ru.

RENO COUNTY — Privett Drilling Co.'s Crotts 1, ne nw ne 27-26s-10w (owdd), sd 3050-55 ft, hfw 3055 ft, sd 3090 ft. McBride's Popp 1, sw sw ne 32-24s-4w, sd 3882 ft. Lario Oil & Gas Co. and Reserve Development Co.'s Shepherd 1, sw nw 18-22s-5w, set 8-in csg 3585 ft, wocs. Johnson & Carey et al's Dyck 1, se ne se 35-22s-5w, set 12-in csg 770 ft, wocs.

RICE COUNTY—Yingling et al's Maupin 1, nw sw sw 1-18s-8w, 1800 ft oil and water 3237 ft, hfw 3243-45 ft, pb to 3239 ft and 1800 ft oih, no test. Gypsy Oil Co.'s Dotson 1, sw nw 25-20s-10w, dr 2292 ft.

ROOKS COUNTY—Stearns-Streeter et al's Hoskins 1, se sw se 34-9s-16w, set 8-in csg 2254 ft, dr 2415 ft.

RUSH COUNTY—Corbett & Barbour et al's Schmidt 1, sw sw se 19-27s-16w, td 3732 ft. D & A Twin Drilling Co. et al's Rolfe 1, sw nw sw 13-17s-19w, pumped 251 barrels oil 9 hours. Flynn et al's Hartman 1, sw se nw 4-18s-16w, rig. Lario Oil & Gas Co. and Phillips' Benbow 1, nw ne ne 12-17s-19w, set 15-in csg 498 ft, dr 830 ft.

RUSSELL COUNTY—Tom Palmer's Herbel 1, nw sw 4-12s-11w, set 6-in csg 3343 ft, hfw 3390 ft, dr 3420 ft. Lario Oil & Gas Co. et al's Moore 1, se nw 34-13s-12w, cellar. J. Brouk & R. D. Bailey's Kluesner 1, nw se 34-15s-12w, rig. Hartman & Blair's Gurney 1, se nw 23-14s-14w, rig. Wolf Creek et al's Donovan 1, sw sw se 10-15s-15w, ru. Hartman & Blair's Sullivan 1, ne ne se 2-14s-15w, rig.

SEDGWICK COUNTY—Allison & Fitzwilliams' Struthers 1, ne sw sw 34-28s-2w, hfw 3176-87 ft, ur 8-in csg 3213 ft. Syndicate Oil & Gas Co. et al's Ratzlaff 1, ne nw nw-30-26s-2e, fsg 3100 ft. Leo Keller et al's Russell 1, sw sw nw 16-29s-2e, cellar. Aladdin Petroleum et al's D. Lauck 1, se ne nw 21-28s-2e, rig.

ABBREVIATIONS

The following abbreviations, signs, etc., are used in completions and wildcat reports in THE OIL WEEKLY.

* —*dry hole abandoned well.*	owdd —*old well drilling deeper.*
‡ —*salt water (completions).*	owpb —*old well plugging back.*
† —*junked and abandoned.*	pb —*plugged back or plugging back.*
¶ —*million feet of gas.*	r —*reaming.*
abd —*abandoned.*	rog —*rig on the ground.*
bbls —*barrels.*	rur —*rigging up rotary tools.*
br —*building rig.*	rust —*rigging up standard tools.*
b.s. —*basic sediment.*	sd —*shut down.*
csg —*casing.*	sdtr —*sidetracking.*
co —*cleaning out.*	sg —*show gas.*
dd —*drilling deeper.*	si —*shut in.*
dk —*derrick.*	so —*show oil.*
dr —*drilling.*	so & g —*show oil and gas.*
fsg —*fishing.*	spd —*spudding.*
ft —*feet.*	sr —*straight reaming.*
hfw —*hole full of water.*	sw —*salt water.*
in —*inches.*	td —*total depth.*
lcn —*location.*	ur —*underreaming.*
m —*milling.*	wih —*water in the hole.*
mim —*moving in materials.*	wo —*workover.*
mit —*moving in tools.*	wocs —*waiting on cement to set.*
mot —*milling on tools.*	wosr —*waiting on standard rig.*
n, s, e, w, —*north, south, east, west.*	
oih —*oil in hole.*	

Magnolia Petroleum Co.'s Bartholomew 1, se sw 30-27s-4w, ru.

STAFFORD COUNTY—Atlantic Oil Co. & Phillips Petroleum Co.'s Guthrie 1, cnw nw 15-25s-11w, dr 2100 ft. Atlantic Oil Co.'s Hohner 1, nw se se ne 31-23s-14w, lcn.

SUMNER COUNTY—Foraker et al's Hiett 1, se sw ne 34-34s-4w, dr 1280 ft. Tom Palmer's Wentworth 1, nw ne 9-35s-2e, set 20-in csg 45 ft, dr 580 ft.

TREGO COUNTY — Marathon Oil Co.'s Kline 1, sw se 19-14s-24w, dr 4936 ft. Central Commercial Drilling Co.'s Wagg 1, nw nw se 17-13s-21w, ru.

OKLAHOMA

ATOKA COUNTY—Brookshire et al's Rowland 1, nw ne ne 18-3s-10e, sd 3709 ft.

BRYAN COUNTY—Hankin & Williams' Slagg 1, se sw ne 20-6s-13e, sd 503 ft. C. B. Welch's M. Collins 1, sw nw 9-8s-8e, mach.

CADDO COUNTY—H. W. Lee et al's Stacey Ferrell 1, sw ne ne 3-6n-13w, dr 890 ft. Denver P&R Co.'s Noe 1, nw sw sw 34-10n-10w, fsg dr pipe 4000 ft.

CARTER COUNTY—Daphfine Oil Co.'s Hooks 1, se sw nw se 5-1s-2w, hfw, pb to test csg 1354 ft. C. P. Williams et al's Singleterry 1, se sw nw 25-2s-3e, fsg for bailer 743 ft.

CLEVELAND COUNTY—Mid-Continent Petroleum Corp. et al's Collett 1, ne sw 35-10n-1w, td 6952 ft, abd.

COAL COUNTY—Moore & Deaner's Edwards 1, nw ne se 27-2n-8e, pb to 4872 ft, to perforate. W. A. Delaney et al's Diamond 1, nw nw se 5-1s-8e, standard rig.

COMANCHE COUNTY—F. F. Stevens' Green 1, se sw 2-1n-13w, fsg for tools 1165 ft.

GARVIN COUNTY — National Producing Co.'s Littrel 1, ne ne ne 31-2n-3w, sd 830 ft.

GRADY COUNTY—Carter Oil Co. & Magnolia Petroleum Co.'s Harrison 1, cnw nw 28-3n-5w, dr 8167 ft.

HUGHES COUNTY—Freeman et al's Kite 1-A, nw nw ne 8-6n-10e, sd 154 ft. Evans & Morris' Day 1, nw sw 30-6n-10e, dr 606 ft. Meyers et al's Scott 1, ne se nw 23-6n-8e, hfw 585 ft.

JACKSON COUNTY—Ben Russell's Butler 1, nw ne 30-1n-22w, td 5555 ft, rip bailers.

JEFFERSON COUNTY—H. F. Young's Bouldin 1, se sw sw 1-7s-4w, dr 2553 ft.

KAY COUNTY—Helmerich-Payne's Crouse 1, cne sw 29-25n-1w, sd 1710 ft. Bay Oil Co.'s Hudson 1, sw ne 14-28n-3e, sso 2732-40 ft and 2853-58 ft, dr 2858 ft. Carter Oil Co.'s Fowler 1, cne 12-27n-1e, set 10-in csg 2075 ft, dr 2158 ft. S. R. McCorkle et al's Hermes 1, sw nw 6-26n-4e, mim. Harris-Haun's W. A. Schuessler 1, cnw sw 3-28n-2e, spd. Lancer Oil Corp.'s Hugo Milde 1, se nw nw 22-28n-5e, lcn.

KINGFISHER COUNTY—Blackgold's Cole 1, csw ne 24-18n-5w, br. Jadeka Development Co.'s Frakes 1, csw ne sw 16-15n-6w, td 7612 ft, dr pipe stuck & abd.

LINCOLN COUNTY—Derrickson & Reserve Pet.'s Law 1, se sw ne 25-14n-3e, rog. R. L. Kemp & Comail Oil Co.'s Dooley 1, ne sw 20-17n-6e, dr 2450 ft. Sinclair Prairie Oil Co. et al's Dunbar 1, sw ne 25-15n-4w, dr 5110 ft. Helmerich-Payne et al's Sturgis 1, se nw 1-15n-2w, dr 2250 ft. Sinclair Prairie Oil Co.'s Boland 1, sw sw sw 25-12n-3e, (owdd) dr 5504 ft, hfw. Charles Balph et al's Young 1, cn½ nw nw 23-15n-5e, rig.

LOGAN COUNTY—Sinclair Prairie Oil Co.'s School Land 1, se se se 36-17n-1w, dr 4420 ft. Shell Petroleum Corporation et al's Hinzel 1, se sw sw 7-16n-2w, br.

McCURTAIN COUNTY—J. V. Schrivner et al's Central Life Association 1, ne sw sw 34-6s-21e, mach.

MURRAY COUNTY—T. E. Revels' Wolfe 1, ne ne ne 18-1n-2e, ur 5-in csg 2565 ft. Equitable Oil & Gas Co.'s Scott 1, csl n½ nw sw 15-1s-3e, ru mach. Manahan Oil Co.'s Ward 1, ne se nw 18-1s-3e, rust.

NOBLE COUNTY—Marathon Oil Co.'s Gilbert 1, ne ne ne 24-22n-2e, dr 3378 ft. Sinclair Prairie Oil Co.'s Cawood 1, csw nw 27-20n-2w, flowed 907 bbls 1st 24 hrs, est 3 M ft gas, will probably complete at this depth.

OKFUSKEE COUNTY—Delton Oil Co.'s Robinson 1, ne ne ne 18-11n-8e, spd. Mid-Continent Petroleum Corp.'s Haney 1, sw se ne 24-12n-8e, rog. Amerada Petroleum Corp. et al's Jaynes 1, nw sw 20-10n-10e, dr 1720 ft.

OKLAHOMA COUNTY—Sinclair Prairie Oil Co.'s Hoyt 1, nw sw ne 5-14n-3e, set 7-in csg 4998 ft, td 5000 ft, wocs. R. Carl Larkin's Brobine 1, nw ne 33-13n-5w, rog. J. C. Shaffer et al's Bullard 1, sw sw sw 13-13n-2w, dr 3275 ft.

PAYNE COUNTY — Marathon Oil Co.'s Potts 1, csw sw 27-19n-2e, dig pits.

PITTSBURG COUNTY—McAllister Petroleum Co.'s Chunn 1, se nw 29-4n-14e, dr 2980 ft. P. H. Gray et al's Lee 1, nw se 12-5n-13e, dr 600 ft.

PONTOTOC COUNTY—Gillette & Kroeger's Duver 1, ne se 1-1n-6e, sd 784 ft. J. D. Sledge & Jack Lynch's Thompson 1-A (twin), sw ne sw 1-1n-7e, td 4110 ft, 1500 gal acid & flowed 106 bbls oil 19 hrs. Southern Oil Corp.'s Ladd 1, cnw nw 27-3n-7e, run 8-in csg 1420 ft. Gillette & Kroeger's Robbins 1, ne se 31-1n-6e, rog & sd. Dixie Oil Co.'s Graham 1, sw se sw 13-1n-2e, set 12-in csg 92 ft, dr 150 ft. Paul R. Robbs' Vittetoe 1, cne se 11-5n-4e, recovered core bbl & sd. H. M. Marcum's Magnuson 1, sw se se 23-2n-7e, set 15-in csg 30 ft, wocs.

POTTAWATOMIE COUNTY — Blackgold Petroleum Co.'s Bizzell 1, cne nw 15-7n-3e, so 4430 ft, td 4432 ft, run 8-in csg & rust.

PUSHMATAHA COUNTY—Burk Royalty Co.'s W. A. Gore 1, se nw se 3-1s-20e, dr 1909 ft.

SEMINOLE COUNTY — Verser & Clay's Thomas 1, ne se nw 1-6n-6e, sd 2422 ft. Ray Dorris & J. T. Hall's Dorris 1, se sw 31-10n-7e, spd. Wofford Drilling Co.'s Abbott 1, ne ne ne 33-8n-7e, rig. Gypsy Oil Co.'s Grayson 1, sw nw 13-6n-5e, dr 1575 ft. Wofford Drilling Co. et al's Thomas 1, nw se 8-6n-7e, rig. Atlantic Oil Co.'s Thompson 1-A, sw se se 15-11n-8e, rur.

STEPHENS COUNTY—Wm. Angle's Johnson 1, ne se 17-1n-8w, sso & water 2230 ft, dr 2246 ft.

TEXAS COUNTY—Ben F. Ash et al's Guyman Twnst. 1, cne se 30-3n-15e, E C N, sd 2420 ft.

CALIFORNIA

KERN COUNTY

BLACKWELL'S CORNER — Amerada Pet. Co.'s Beer 1, 17-26-19, dr brown shale 4155 ft.

BUENA VISTA LAKE—Shell Oil Co.'s B. V. A. 1, 9-32-25, rur.

CALIENTE—Signal Oil & Gas Co.'s S. P. Land Co. 1, 31-29-30, td 493 ft, topped os 335 ft, cemented 12¾-in csg 305 ft.

COMANCHE POINT—Comanche Oil Co.'s No. 1, 15-32-29, sd 4325 ft. Tejon Ridge Oil Co.'s No. 1, 23-32-29, td 1522 ft, waiting on dr pipe.

DELANO—Cimarron Oil Corp's Quinn 1, 14-25-27, dr shale 1653 ft.

DEVIL'S DEN—Richfield Oil Co.'s Alferitz 2, 14-25-18, rur.

EDISON—Cara Vel Pet. Corp.'s No. 1, 19-30-30, td 1910 ft, plug to 1800 ft, to test.

GOULD HILLS—The Texas Co.'s Jared How 1, 29-29-21, dr sand and shale 1254 ft.

GREENFIELD—Sea Cliff Oil Co.'s Houghton 1, 7-31-28, sp and sd.

KERNEL — Standard Oil Co.'s Guarantee Title 1, 1-25-23, lcn.

LOST HILLS—Standard Oil Co.'s United 1, 2-26-20, foundations.

NEAR MOUNTAIN VIEW—Hogan Pet. Co.'s Symons 1, 4-31-29, dr sand and shale 3270 ft.

SEMITROPIC—Standard Oil Co.'s Hill 1, 8-27-23, rigged and idle.

SO. BUTTONWILLOW—101 Oil Co.'s No. 1, 5-30-24, rur.

SOUTH DOME — Continental Oil Co.'s Gatchell 1, 7-25-20, lcn.

TEMBLOR HILLS—Robt. Foster's No. 1, 2-32-22, dr brown shale 2060 ft.

WHEELER RIDGE—Badger Oil Co.'s El Tejon 1, 31-11-19, td 6229 ft, plug to 4000 ft, sd. Reserve Oil & Gas Co.'s Tejon Ranch 1, 2-10-19, material on lcn.

WEED PATCH—Associated Oil Co.'s Di Giorgio 1, 3-31-29, dr sandy green shale 4881 ft

KINGS COUNTY

DUDLEY RIDGE—Dudley Ridge Dev. Co.'s No. 1, 24-23-20, rig.

PYRAMID HILLS—General Pet. Corp.'s Martin 1, 20-24-18, rig.

TULARE LAKE—Commonwealth Cons. Oil & Gas Co.'s No. 2, 21-22-20, rur.

FRESNO COUNTY

CANTUA—Western Gulf Oil Co.'s S. P. L. 1, 11-17-15, abn 7379 ft.

DOS PALOS—Bergman Oil Co.'s Ora Loma Farms 1, 12-12-11, sd 6006 ft. Russ Oil Synd.'s No. 1, 28-12-11, sd 4370 ft.

NEAR COALINGA—The Texas Co.'s Circle Oil Co. 1, 35-20-14, dr hard shale 995 ft.

HUMBOLDT COUNTY

EUREKA—The Texas Co.'s Eureka 1, 1-3-2, dr shale 650 ft.

MADERA COUNTY

DOS PALOS—Pure Oil Co.'s Chowchilla 1, 7-10-14, pulled liner, to deepen, td 8244 ft.

SACRAMENTO COUNTY

CLAY STATION—Great American Pet. Co.'s Howard 1, 25-2-8, dr sandy shale 2686 ft.

SAN JOAQUIN COUNTY

TRACY—Milham Explor. Co.'s Moy 2, 24-3-4, td 4002 ft, landed 6⅝-in csg including 214 ft perforated 4002 ft, test showed nothing, to perforate and test 3570-3690 ft.

SUTTER COUNTY

MARYSVILLE BUTTES—Buttes Oilfields' No. 2, 35-16-1, dr hard sand and shale 6770 ft, carrying 90-pound mud, showing good gas pressure.

TEHAMA COUNTY

CORNING—Northern Counties Pet. Co.'s Ewers-Mooney 1, 25-24-3, dr hard shale 2005 ft.

TULARE COUNTY

ALPAUGH—Mastodon Oil Co.'s No. 1, 27-24-23, rig abn.

YOLO COUNTY

GUINDA—Pacific Northern Oil & Gas Co.'s No. 1, 23-12-3, sd 6770 ft.

SANTA BARBARA COUNTY

GOLETA—Shell Oil Co.'s Bishop 1, 20-4-28, dr sandy shale in the Sespe formation 5565 ft.

LOMPOC—Lompoc Pet. Co.'s Beauterbough 2, 18-7-34, sd 2975 ft.

SISQUOC—No. 1, 35-9-32, sd 4500 ft.

NEAR SANTA MARIA—Union Oil Co.'s Enos 1, 23-10-34, dr sandstone 3470 ft.

SUMMERLAND—Ortega Oil Co.'s Williams 1, 16-4-26, td 4583 ft, plug 4146 ft, swabbing.

SAN LUIS OBISPO COUNTY

SEE CANYON—Farrell Pet. Co.'s No. 1, 18-31-12, sd 1420 ft.

CHOLAME—Willett Oil Assn's Jack 2, 10-25-15, td 3500 ft, wocs 10-in csg 2630 ft.

VENTURA COUNTY

BARDSDALE—Daniel Fisher's Elkins 1, 5-3-19, sd 762 ft.

HOPPER CANYON—Los Palos Pet. Co.'s Mahan 1, 22-3-20, td 7370 ft, fsg liner, top at 6909 ft.

OJAI—Continental Oil Co.'s Pirie 1, 12-4-23, dr red clay 1155 ft. Rancho Oils' Rancho Santa Ana 1, 18-4-23, sd 2525 ft.

RINCON—Woodrow Pet. Corp.'s Woodrow 1, 4-3-24, sd 7615 ft.

SANTA SUSANA—E. N. Dakes' No. 1, 6-2-17, sd 300 ft.

SHIELLS CANYON — The Texas Co.'s Shiells 128, 4-3-19, td 5433 ft, stuck dr pipe, circulating oil.

SOUTHERN CALIFORNIA

ATHENS AREA—F. A. Speik's Johnson 1, 2-3-14, rig.

ARTESIA—Vanco Dev. Co.'s Millard 1, 25-3-12, rur.

BREA CANYON—Pressel-Perry-Tull's Baird 1, 30-2-9, dr hard shale 4128 ft.

CARBON CANYON—Tehama Pet. Corp.'s Kramer 1, 33-2-8, sd 2680 ft.

CHATSWORTH—Marble Inv. Co.'s Deer Lake 1, 6-2-16, co, 2600 ft.

EAST RICHFIELD—Midrich Dr. Co.'s Vejar 1, 26-3-9, sd 4056 ft.

HERMOSA BEACH—Corniel Oil Corp.'s No. 1, 31-3-14, to test on pump 3900 ft. Aron H. Hover's Bryant 1, 31-3-14, sd 4200 ft.

HUNTINGTON BEACH (on tidelands)—Black Eagle Oil Co.'s No. 1-B, Permit 194, 32-5-11, wocs 5-in csg 4265 ft, td 4702 ft.

LOS NIETOS—Rex Anglin Dev. Co.'s Fallis 1, 30-2-11, sd 1210 ft.

MANHATTAN BEACH—Staple Oil Co.'s No. 1, 24-3-15, dr brown shale 5748 ft.

PLACENTIA—Placentia Dev. Co.'s Verde 1, 35-3-9, td 4250 ft, redr 3172 ft.

PUENTE—N. O. Shively's Rowland 1, 23-2-10, dr hard shell 2330 ft.

SAUGUS—International Oil Developers' Powell 1, 34-5-16, pulled tubing, to deepen from 3490 ft.

SURF—B & B Oil Co.'s No. 1, 19-6-10, dr brown shale 2923 ft.

SAN DIEGO COUNTY—E. A. Hargraves' No. 1, 29-15-3, dr hard conglomerate 2208 ft.

NEW MEXICO

DONA ANA COUNTY—Viking Oil Co.'s State 3, sw nw 26-23s-5e, abd at 900 ft without plugging.

EDDY COUNTY—A. M. Petroleum Co.'s State 1-A, csw ne 16-21s-27e, dr at 1220 ft. R. D. Compton's Price-State 1, ne sw 15-16s-28e, abd at 952 ft. Pecos Valley Drilling Co.'s State 1, nw nw 32-24s-27e, dr at 560 ft. Neal Willis et al's Montgomery 1, csw ne 30-19s-30e, waiting for cement to set at 385 ft. Stanolind Oil & Gas Co.'s Duncan 1, cse sw 30-21s-30e, dr at 3085 ft in the salt.

GUADALUPE COUNTY—New Mexico Producing & Refining Co.'s McMullen 1, sw 24-5n-16e, abd at 4718 ft.

McKINLEY COUNTY—Royer Oil Co.'s Santa Fe 1, cnw sw 13-15n-10w, running 6⅝-in csg to stop caving in blue shale below 650 ft.

ROOSEVELT COUNTY—Claudell Development Co.'s Wilmes 1, sw se 21-2s-30e, dr in salt at 2085 ft.

SAN JUAN COUNTY—Nick Spatter's Test 1, ne sw 32-31n-11w, making water shutoff at 993 ft., sg at 975 ft. Webb Holding Co.'s State 1, nw 6-30n-11w, csg landed at 770 ft where good gas showing has been encountered.

SANTA FE COUNTY—Fisher & Wolcott's Hill 1, sw 6-10n-6e, dr at 2385 ft. Holmberg Interests' Cantwell 1, nw ne 5-10n-9e, sd at 812 ft for csg.

VALENCIA COUNTY—Ringle Development Corporation's Tome Grant 1, cse se 20-6n-3e, dr below 200 ft.

WYOMING

CARBON COUNTY—Argo Oil Co.'s Frank Johnston-Union Pacific, se 5-24n-87w, changing over to cable tools to dr into the Dakota, td 3172 ft. Ohio Oil Co. and California Co.'s Kyle 1, ne se ne 26-21n-79w, dr at 1370 ft. Ohio Oil Co.'s Sid Morris 1, cnw se 6-20n-77w, sd temporarily at 5190 ft.

CONVERSE COUNTY — John Ackard's Daniels 1, se se 17-32n-71w, udr pipe to bottom at 2350 ft. E. B. Jones' Teakle 1, sec 17-32n-69w, completed for 70,000 cu ft of gas at 565 ft.

FREMONT COUNTY—Mid-American Oil Co.'s Government 2, cne sw 14-28n-92w, dr below 300 ft.

HOT SPRINGS COUNTY—California Exploration Co.'s Government 1, ne se ne 12-44n-97w, dr at 3748 ft.

MONTANA

BIG HORN COUNTY—Enterprise and Embar Driling Co.'s Lynde 2, sw nw se 21-6s-35e, 4¾-in string collapsed 200 ft off bottom at 3605 ft and may abandon.

LIBERTY COUNTY—J. H. Hamilton Syndicate's Northern Farms 1, cne sw 10-37n-5e, resuming drilling at 1800 ft.

COLORADO

ARCHULETA COUNTY—Oil City Petroleum Co.'s Garnett 2-X, Lot 3, ne sw 25-33n-52e, dr suspended at 970 ft in top of Muddy with so waiting for pipe and tankage.

EL PASO COUNTY—Utemoor Syndicate's Carson 2, nw ne ne 10-16-66, Fountain district, abd in the Lakota at 2547 ft.

MONTEZUMA COUNTY—Coon & Teague's (McElmo Oil Co.) West 1, ne nw nw 31-36-17, McElmo district, cemented cave at 2650 ft, sg at 2640 ft.

PARK COUNTY—South Park Oil Co.'s State 1, se se sw 16-11s-17w, dr at 675 ft.

PROWERS COUNTY—Trojan Oil & Gas Co.'s Lotus 1, nw ne ne 15-23s-46w, Lamar district, dr deeper from 4065 ft.

EAST TEXAS

ANDERSON COUNTY—Gulf Prod. Co.'s M. A. Davey-T. Royall 1 (174-ac), nwc of M. Rogers sur, Camp Hill area, elev 572 ft, Pecan chalk 3890-4223 ft, Austin chalk 4879-5058 ft, tested good sg in Sub-Clarksville 5054-66 ft, top Woodbine 5176 ft, yielded sw on series drill stem tests, coring 5400 ft. J. W. Luttes et al's C. M. McKee 1 (100-ac), Walter F. Pool sur, 3 mi se of Frankston, dk. Tide Water & Texas Seaboard Oil Co.'s N. N. Wills 21-A, Sam Edmundson sur, Cayuga field, Trinity sand test, rig. Trinity State Oil Co.'s Trinity River 1, Cayuga area, elev 254 ft, Pecan chalk 2208-2410 ft, Austin chalk 3175-3508 ft, top os 4006 to 4016 ft, gauged 25 bbls oil per hr one half-inch tubing choke.

BOWIE COUNTY—Tex-Ark Oil Co.'s J. B. Hamilton 1 (319-ac), Jessie Milam sur, elev 272 ft, rig.

CASS COUNTY—A. D. King, Tr. and E. S. White's G. W. Allday 1 (40-ac), R. F. Whittaker sur, 4 mi ne of Linden, dk. H. F. Wilcox et al's S. A. Orr 1 (316-ac), G. W. Morris sur, elev 381 ft, sd 3887 ft. Broderick & Calvert, Inc.'s I. J. Cagle 1-A (80-ac), H. Cunningham sur, sd for repairs 3660 ft.

CHEROKEE COUNTY—J. B. Daniels Oil & Royalty Co.'s Southern Pine Lumber Co. 1, Weches area, jkd and abd 2443 ft, skid rig. Jacksonville O&G Corp.'s H. D. Henderson 1 (40-ac), J. Pineda sur, elev 409 ft, sd 693 ft. Killough et al's J. S. Strickland 1 (40-ac), Urian Moore sur, 7 mi nw of Jacksonville, elev 433 ft, sd 2565 ft Rowan-Nichols Oil Co.-Simms Oil Co.'s C. V. Gilbreath 1 (60-ac), H. M. Brewer sur, Reklaw area, lcn. E. M. Thomason & Co., Inc.'s W. J. Addis 1 (80-ac), Jessie T. Jones sur, elev 471 ft, sd 2150 ft.

ELLIS COUNTY—Bodie D. Fenley and Beckner's Lon Coker 1 (30-ac), R. de la Pena 11 League Grant, Lot 102, sd 527 ft.

FREESTONE COUNTY—Walter M. Burress et al's J. B. H. Orand 1 (50-ac), W. M. C. Jones sur, 1¼ mi n of Fairfield, sd 1000 ft. J. P. Haley & Chas. F. W. Young's G. Cochrum 1 (380-ac), D. Bullock sur, 1 mi se of Luna, lcn.

GREGG COUNTY—O. T. Clark et al's T. G. Williams 1 (100-ac), David Hill sur, 3 mi

ne of Longview, elev 426 ft, top Pecan chalk 2391 ft, dr 2610 ft.

HENDERSON COUNTY—J. C. Crosby and Culp's M. T. Dodd 1 (160-ac), Geo. Aldrich sur, 4 mi e of Malakoff, elev 376 ft, Pecan chalk 2390-2504 ft, Austin chalk 3456-3610 ft, sd in shale 4150 ft. Great State Oil Corp.'s (Dick Andrade & R. S. Bond) R. Sid Ansley 2, N. B. Thompson sur, elev 268 ft, dr 650 ft.

HOPKINS COUNTY—D. A. Hale et al's L. M. Hall 1 (70-ac), A. Caro sur, A-143, elev 506 ft, sd 1492 ft.

HUNT COUNTY—D. T. Cauble & Mrs. J. C. Thompson's Y. B. Reed 1 (220-ac), F. Thweatt & C. B. Payne sur, A-1054, 3 mi se of Greenville, dk. Dilworth Hager-J. S. Abercrombie Co. & Harrison Oil Co.'s W. A. Morrison 1, Abie Lawson sur, dry and abd in Georgetown lime 3191-3211 ft; Dallas Land Bank 1, L. Hart sur, 7 mi sw of Greenville, rig. Julian C. Hall et al's A. B. Parrish 1 (100-ac), (S) Nancy Danley sur, rog. L. G. Priest et al's A. Barnett 1 (212-ac), J. C. Hamer sur, A-417, elev 607 ft, Pecan chalk 1452-1529 ft, Austin chalk 1882-2488 ft, top Woodbine section 2955 ft, coring lower Woodbine sand with sog&w at 3505 ft. J. E. Winans et al's J. R. Phillips 1 (53 1/3-ac), W. L. James sur, elev 558 ft, sp and sd.

KAUFMAN COUNTY—L. P. Kean et al's J. B. Hunter 1, R. Sowell sur, top Austin chalk 1785 ft, sd 2010 ft.

LIMESTONE COUNTY—David J. Crawford et al's Vol DeLong 1 (59.3-ac), Pedro Varella sur, 2½ mi n of Thelma, sd 1650 ft. C. F. Carter et al's Dean 1 (75-ac), Pedro Varella sur, lcn. E. L. Chapman et al's J. B. Hunt 1, I. Wood sur, 3 mi ne of Kosse, rig. Dan H. Daugherty et al's Sallie Welch 1 (94-ac), Pedro Varella sur, rig. J. R. Stroud et al's G. W. Strother 2 (160-ac), W. G. McKenzie sur, lcn. T. S. Watson and W. C. Moore's T. M. Wilson 1 (236 1/3-ac), Alex W. Patton sur, 1¼ mi se of Prairie Hill, Austin chalk 1205-1395 ft, dr 1410 ft. V. V. Waite et al's Cannon Barron 1 (320-ac), W. G. McKenzie sur, 4 mi n of Thornton, lcn.

MORRIS COUNTY—C. M. "Dad" Joiner et al's Reese 1, T.C. Ry. sur, dr 1610 ft.

NAVARRO COUNTY—Bennett Bros. et al's T. E. Stewart 1 (83-ac), W. R. Bowen sur, sd 1186 ft. R. B. Godding et al's W. Kent 1 (48½-ac), C. B. Emmons sur, sd 1340 ft. W. J. Keeling Estate et al's J. F. Rushing 1 (84-ac), Henry Ford sur, 6 mi w of Currie, elev 530 ft, Austin chalk 2155-2395 ft, top Woodbine sand 2858 ft, sd 2880 ft. L. N. McCulloch et al's Berry Bros. 1 (35-ac), W. W. Moss sur, sd 625 ft.

RAINS COUNTY—J. K. Wadley & J. W. Halsell's T. F. Jones 1 (22-ac), BBB&C Ry. sur, elev 425 ft, Pecan chalk 2503-2700 ft, top Austin chalk 3970 ft, co 4632 ft.

RED RIVER COUNTY—J. S. Abercrombie Co.-Harrison Oil Co.'s Bowen-Grant 1 (528-ac), P. D. Midkiff sur, 6¼ mi nw of Clarksville, dr 180 ft. J. F. Dinger et al's W. T. Norris 1 (400-ac), Joseph Guest sur, 1 mi s of Detroit, dk.

ROBERTSON COUNTY—Dr. W. M. Manness et al's Sackville ! (1392-ac), M. M. Viesca sur, sd 197 ft.

RUSK COUNTY—Ben E. Lamb et al's Haywood Leath 1 (185-ac), L. J. Dooley sur, 2½ mi e of Pirtle, elev 370 ft, Pecan chalk 2418-2793 ft, dr 3360 ft.

SMITH COUNTY—A. G. Deck et al's Dora Kendall 1, John Williams sur, 3 mi e of Van field, sp and sd. R. W. Fair et al's W. P. Rushing 1 (50.8-ac), Jacob Herrin sur, elev 393 ft, top Pecan chalk 3130 ft, Austin chalk 4000-4250 ft, top Woodbine sand 4296 ft, sd 4673 ft. Paul S. Williams et al's J. M. Dean 1 (100-ac), V. Moore sur, Bullard dome, elev 485 ft, fsh 2560 ft.

UPSHUR COUNTY — Byrd-Frost, Inc.'s Pittsburgh Nat'l Bank 1, John Parker sur, Ore City area, lcn.

VAN ZANDT COUNTY—J. C. Acre et al's F. W. Anderson 1 (160-ac), John Blair sur, 4 mi n of Wills Point, sd 2065 ft. American Oil Co.'s J. R. Bryant 1, coring 1235 ft. Roy I. Carter & Jennings' Sallie McGee 4 (43.4-ac), Blk. 20, Wm. Daniel sur, elev 441 ft, testing sand 1260-68 ft. Joe Cadrin et al's J. F. Bass 1 (16-ac), Wm. Hart sur, sd 1700 ft. Pete Corley et al's J. L. Slaton 1, Wm. Carlton sur, 3 mi se of Ben Wheeler, elev 514 ft, Pecan chalk 3130-3170 ft, dr 3850 ft. Florence Oil Co.'s Sanger Inv. Co. 1 (50-ac), John Walling sur, pb from 3055 to 3050 ft. Green and Wynn's A. L. Eaton 1, L. Smith sur, lcn. S. E. Miller et al's J. M. Palmer 1 (39.1-ac), Blk. 14, NCSL sur, fsh 1000 ft. L. B. Pruitt & W. W. Graham's G. W. Carter 2 (5.87-ac), Wm. Daniel sur, dr 2900 ft. Rauch Bros.' (Weltex Oil Corp.) Bearden-Palmer 1 (61.1-ac), Blk. 11, NCSL sur, sd 1237 ft. J. K. Wadley et al's Carnes 1 (588-ac), S.P. Ry. sur, A-887, rig.

EAST TEXAS BORDER COUNTIES

HARRISON COUNTY—Hammonds & Williams' W. T. Cook 1, J. N. Sorrell sur, sd 2392 ft, arr skid over for new hole. Hanover, Bergendall et al's Buchanan 1, W. M. McIlvain sur, sd 2702 ft.

MARION COUNTY—Ed. S. Holman's Henderson 1, R. Bennington sur, arr res 2552 ft. W. H. Oberthier's East Texas Ore & Dev. Co. 1, Walter H. Gilbert sur, sd 3424 ft (Ozan).

PANOLA COUNTY—Faults Supply Co.'s Wooten Est. 1, Winny Mann sur, 6⅝ in csg 2058 ft, tested so & sw 2140 ft, pb to 2100 ft. Givens & Holloway's Wooten Est. 1, Winny Mann sur, sd 2154 ft. R. W. Price's A. A. Crawford 1, Jas. A. Williams sur, (63-ac), spd 10-in csg 64 ft. Neel & Nixon's E. Rushing Est. 1, M. Smith sur, dk.

SHELBY COUNTY — Turner & Neal's Pickering Lbr. Co. 1, P. W. Harvey sur, sd 1655 ft. Stovall et al's Pickering Lbr. Co. 1, P. W. Harvey sur, sd 1490 ft. O. P. Bush, Tr.'s Pickering Lbr. Co. 1, P. W. Harvey sur, spd, dr 325 ft.

SOUTH TEXAS

BANDERA COUNTY—W. B. Kyle et al's R. L. Duke 1, J. A. Bennett sur No. 7, wait on rig. Peerless O&G Co.'s R. G. Garrison 1, Sec. 506, GC&SF sur, sd 1181 ft for orders, elev 1831 ft.

BASTROP COUNTY—Marts & Beavens' J. W. Voss 1, A. Litton sur, dr 375 ft. Joe Mills et al's Mrs. W. H. Cardwell 1, J. A. Navarro sur, sd 1324 ft, elev 475 ft. Ogden & Reed's M. F. Talley 3, J. Gray sur, dr 2200 ft, last rept. Porter & Neal's J. E. Wolff 1, F. Edmundson sur, dr 1000 ft.

BEE COUNTY—Blanco Oil Co. & Al Buchanan's P. Perez 2-A, Sec. 9, J. M. Uranga Gr., dr 3750 ft. Dirks Bros.' Foley 1, 330 ft nl and wl of Keeler sur, mim; J. E. Roth 1, Sec. 7, J. M. Uranga gr., sand 3882-84 ft, dst 3880-84 ft, 750 ft oil, no water, 55 lbs, wp, ¼ ch bottom, 3/15 ch top, setting csg, looks like new field. Falvey et al's J. J. Grissom 1, McElroy sur, set sur csg, wocs. Cecil Hagen et al's John R. Scott 1, 12,500 ft sl and 24,800 ft el Uranggar, dr 1865 ft. Luling O&G Co.'s B. B. Ruhmann 4-B, Blk 39, Hodge sur, sand 3068-87 ft, dst 10 frbles oil 30 min, dr out plugs. Mid-Continent Crude Oil Co.'s A. J. Kimballs, S. Winship sur, td 3555 ft, pb 3547 ft, 7 in 3540 ft, sand 3540-55 ft, testing. Kenneth Morgan et al's Hicks-Hall 1, Blk 37, J. M. Uranga gr, prep to dd from 3638 ft. Wm. F. Morgan's W. L. Demory 1, 450 ft sl and wl 80-ac tr, J. M. Uranga gr, 1/3 mi nw Morgan's Hicks well, lcn. R. J. Worthington et al's Rutledge 1, td 3424 ft, trying to loosen stuck ds.

BEXAR COUNTY—N. G. Carter's E. & T. Ruiz 1, F. Rolen sur No. 48, td 1690 ft, running csg to test. M. J. Crouch's Hoch Heirs 4, J. M. Barrerra sur, lcn. Eckert & Stieren's Annie I. Terrell 1, J. Martinez sur, dr 880 ft. Jones & Keiffer's E. W. LaGrange 1, F. Rolen sur, sd 165 ft. George O'Neill et al's Holly Crouch 1, near Eckert field, dr 987 ft. Richoul Oil Co.'s Terrell 1, 1750 ft nl, 150 ft el 105-ac tr, Sec. 53, lcn. Trawalter & Umburn's Wm. A. Biel 3, 1720 ft w No. 2, Sec. 59, prep to mim. R. Y. Walker's L. A. Hamilton 1, Juan Montez sur, dr 998 ft.

BROOKS COUNTY—Mrs. Florence East's G. Madrigal 2, 2790 ft sl, 990 ft wl, Share B., R. G. Salinas Gr, sd 75 ft. Helmerich & Payne, Inc.'s, Scott & Hopper 1, center sur No. 44, Palo Blanco gr, prep to mim.

CALDWELL COUNTY—O. Dawn's F. Tiller 1, G. Hinds sur, dr 2289 ft. W. B. Hinton's Osteen 1, Swearingen sur, td 2044 ft, put on pump. Kurz Oil Prod. Co.'s C. Kurz ranch, Klecamp sur, sd around 4100 ft, may abnd. F. Meyers' Mooney 1, S. Seal sur, ru and sd. McNeil Pet. Co.'s J. W. Miears 1, Swearingen sur, dr 1675 ft. Moseley et al's J. M. Pierce 1, Seale sur No. 8, top chalk 2186 ft, coring 2196 ft.

DE WITT COUNTY—Stewart & Egan's R. Kleberg 1, 680 ft wl, river, and mid-way between nl and sl of tr in J. Tumlinson sur, 2 mi nw Cuero, sp and sd.

DUVAL COUNTY—Mills Bennett's (J. R. B. Moore) Duval County Ranch Co. 1, Sec. 192, 5 mi w s end Gov't Wells, td 3006 ft, pb 1280 ft, sdtr and re-dr to 1505 ft, csg 1471 ft, comp 15,000,000 cu ft gas, 525 lbs rp, opens new field. Buffalo-Texas Drlg. Synd.'s Escobar 1, td 3218 ft, reinstate, co to dd. Conway & Buescher's W. K. Hoffman 1, Sec. 119, elev 582 ft, top Jackson 2100 ft, upper GW sand 2853 ft, lower GW sand 2916 ft, Mirando 2990 ft, coring for Pettus 3890 ft. H. F. Grimm et al's Fitzsimmons 1, Sec. 291, sd 1150 ft. Humble Oil & Ref. Co.'s Ruiz 1, 2080 ft sl, 200 ft wl Sec. 553, BS&F sur, 2 mi e Gov't Wells, sand 2785-90 ft, dst 2780-90 ft, 500 ft 25 gravity oil, 50 lbs pressure 10 min, set csg, wocs; looks like new field from Mirando sand. Magnolia Pet. Co.'s Ruiz 1, Sec. 68, dr 3325 ft, ran formation testing device 1500-3280 ft, showed nothing interesting; Herbst 1, 330 ft sl and el Sec. 70, 3 mi e Gov't Wells, dr 2200 ft. W. C. McBride, Inc.'s, E. R. Hagist 1-A, Sec. 265, could not comp fsh job 2160 ft, skidding 30 ft for new test. Southwest Oil Co.'s Cuellar 1, Sec. 114, dr 520 ft, corrected depth. Stieren Oil Co., Inc.'s, Philp 1, elev 766 ft, df, dr 3330 ft. The Texas Co.'s T. J. Graham 1, Sec. 571, dr 2765 ft. E. R. Thomas's Parr Ranch 1, 2590 ft sl, 150 ft el Sec. 26, dr water well, mim. J. H. Winch's Smith Corkill 1, Sec. 491, dr 2600 ft.

EDWARDS COUNTY—T. A. Ohlhausen's Turney 1-B, Sec. 176, fsh 880 ft.

FRIO COUNTY—Amerada Pet. Co.'s Halff & Oppenheimer 2, J. H. Gibson sur No. 16, td 10,050 ft, pb 3925 ft, perf 3907-15 ft, flow 15,000,000 cu ft gas, spray 75 bbls fluid per day, 2/3 sw, rest 24 gravity oil, 1250 lbs pressure shut in, wait on separator. Shoemaker et al's M. Roach Est. 1, 100 ft sl, 210 ft wl C. Wentzel sur No. 139, lcn.

GOLIAD COUNTY—Magnolia Pet. Co.'s V. Albrecht 1, J. P. Reid sur, dr 3230 ft.

GUADALUPE COUNTY — Diamond Half Oil Co.'s A. Schmidt 1, Wakfield and Stewart sur, sp. Grayburg Oil Co.'s F. C. Appling 1, J. Hodges sur, top chalk 2422 ft, dr 2650 ft. Harrison S. Green's (L. E. Trout) Myrtle McKee 1, Green DeWitt sur, sd 2830 ft.

HIDALGO COUNTY — Clary, Spencer & Hood's Brock & Showers 1, Lot 8, Blk 9, Vista Hermosa sub, Por. 80, ru. DMC Oil Co.'s Daskam 1, Blk. 43, Por. 45, sd 2310 ft. Gato Oil Co.'s Brock & Showers 1, Blk 26, Por. 79, dr 1830 ft. Heep Oil Corp.'s W. R. Jackson 1, Tr. 278, Por. 39, dr 5090 ft. Kingwood Oil Co.'s Daskam 1, 215 ft wl, 218 ft nl Lot 23-A, Blk 49, King-Woods sub of Daskam Land, Por. 41, lcn; Margaret McAllen Fairbanks 1, 1475 ft el, 1985 ft nl of 932-ac tr, and in Lot 12, King-Wood sub of tract, Por. 64, 8 mi s McAllen, dr 1365 ft. T. I. Larsen, Trustee's G. G. Salinas 1, Share 1, Por. 41, coring below 2835 ft. Maxwell & Young's King 1, Lot 8, Blk 11, Alamo tract, 4 mi s Alamo townsite, td 875 ft, re-instate to dd, now bldg dk Union Sulphur Co.'s American Rio Grande Land & Irr. Co. 2, Blk 86, Lot 2080, N. Capisallo District, Llano Grande Gr, dr 7902 ft; John C. Engelman 1, Lot 3, Blk 79, La Mastena gr, dr 6217 ft.

JACKSON COUNTY—Atkins & O'Neil's Hodges 1, center Blk 22, LaWard Farms sub, coring 5858 ft.

JIM HOGG COUNTY—Sun Oil Co.'s A. L East 1, Blk 4, Sec. 33, dr 4640 ft.

JIM WELLS COUNTY—O. W. Killam's W. D. Wade 3, 330 ft nwl and midway between nel and swl of Blk 3, Bode sub C, dr out plugs, approx depth 3000 ft. Magnolia Pet. Co.'s A. A. Seeligson 5, sur 218, dr below sur csg. Sinclair Prairie O&G Co.'s A. A. Seeligson 1, sur 215, running wild and burning 3865 ft, dr relief hole. Smith & Storey's M. E. Dilworth 1, S. Welsh sur, Sec. 88, td 6115 ft, pb 3749 ft, set 7 in csg 3725 ft, sand 3733-49 ft, test sw, pb 3300 ft, wocs. Walsh & Long's Allen Land

and Cattle Co. 1, 150 ft nwl and swl Lot 1, Blk B, Bode sub, set 350 ft sur csg, wocs.

KARNES COUNTY—R. E. Cezeaux et al's T. Campbell 1, J. R. Backer sur, td 1254 ft, sd, but will re-dr after Jan 1. E. E. Green's Miss Olive Henke 1, Seguin Grant, sp delayed acct flooded location. Pacific Gas & Fuel Co. (Marr) Choate 2, 1020 ft fr ne cor se along nel, thence 330 ft sw at rt angles in A. Storey sur, 2 mi ne No. 1, lcn. J. A. Thompson's A. J. Lyons 1, 330 ft swl, 1320 ft se of nl of Choate 1035-ac tr in Bass sur, lcn.

KERR COUNTY—Admerald Oil Co.'s (Edmiston & Walker) Whitworth 1, HE&WT sur No. 1439, to dd from 680 ft. Jeff Love & Eastland Oil Co.'s Jeff Love 5-E, Sec. 1591, td 3530 ft, in Pennsylvanian, 6⅝ in csg set 3065 ft, swabbing, hole standing 1500 ft in oil but could not be lowered, showed some gas and estimated at 50 bbls per day, established new field. J. F. Morrisey, Inc.'s F. A. Karger 1, BS&F sur No. 1, Ab 77, dr 2010 ft.

KLEBERG COUNTY—Harry Clark et al's M. Phillips 1, 250 ft nl, 165 ft wl Blk 1, Sec. 50, Kleberg town sub, sp.

LAVACA COUNTY—L. A. Douglas' Matt Pustka 1, Moses Mitchell sur, sd 610 ft for water. Humble Oil & Ref. Co. & Mag. Pet. Co.'s C. S. Wilson 1, J. C. Crenshaw sur, dr 5778 ft.

LEE COUNTY—James E. Pederson's C. A. Turner 1, David Hudson sur, td 6347 ft, set 6⅝ in csg 5135 ft, elev 438 ft, top chalk 4910 ft, top Georgetown 6120 ft, now dr out plugs.

LIVE OAK COUNTY—Baugh & McMillan's Walton & Campbell 1, D. R. Fant sur, sd 1000 ft to dr water well. Henderson Coquat's Little 1, M. M. Shipp sur, testing sand 4570-75 ft. Durbin et al's Marbach 3, S. Hays sur, td 870 ft, set 7 in 864 ft, swabbing. Houston Oil Co.'s Cartwright 29, J. M. Colchado sur, dr 5188 ft. Lion Oil & Ref. Co.'s McNeil 2, Jane Curry sur, td 6034 ft, showed considerable gas, some sw and oil, pb 4295 ft, to perf just above level. Loma Oil Co.'s Brewer 1, Sparks sur, sp; Cardwell 1, Sparks sur, dr 985 ft.

MAVERICK COUNTY — Andrews et al's Matthews 1, B. C. Flowers sur, r 482 ft.

McMULLEN COUNTY—H. K. Boysen et al's E. R. Hagist 1, Sec 10, H&TC sur, dr below 2000 ft. L. D. Ormsby's L. Jacob Corp. 4, 600 ft nl, 700 ft el se¼ W. H. Jacobs sur No. 50, dr 450 ft. Chas. Wuest & C. L. Witherspoon's Lark (Fisher) 1, R. O'Boyle's sur, dr out plugs on sur csg at 60 ft.

MILAM COUNTY — C. F. Drake et al's Standard Coal Co. 1, G. L. Johnson sur, elev 416 ft, sd 1569 ft. Second National Bank's B. P. Ward 1, L. Taylor sur, sd 2439 ft.

REAL COUNTY—H. J. Heartwell's Mrs. M. S. Perry 1, Sec. 175, AB&M sur, sd 2975 ft for rig rep.

REFUGIO COUNTY—Magnolia Pet. Co.'s F. B. Rooke 1, Dona J. Reojas sur, sd 1243 ft, dr water well, set 13⅜ in csg 1243 ft. Quintana Pet. Co.'s Tom O-Connor 4-A, center proration Unit 64, Swisher sur No. 3, dr 4450 ft; O'Connor -B, 500 ft wl, 2600 ft sl M. L. White sur, dr 5636 ft. Santa Clara Oil Co.'s (Atkins & O'Neil) Mattie Woods 1, Sec. 8, Jose McGehaus sur, sp (well on Bee County line and was rept last week as being in that county).

SAN PATRICIO COUNTY — Heep Oil Corp.'s Welder 4, J. & F. Portillo sur, td 7247 ft, pb and perf csg 5880-90 ft, flowing 60 bbls 33 gr oil, 150 bbls sw thru ¼ in choke, wp on tubing 1600 lbs, closed in pressure on casing 1900 lbs. Plymouth Oil Co.'s E. H. Welder 2-B, Musquiz sur, td 5387 ft, washing over ds in attempt to loosen.

STARR COUNTY—Jule Alford Oil Co.'s A. Flores 1, Tr 250, Por 38, sd 3502 ft, working out deal to dd to 5500-ft level. C. R. Borah et al's A. Guerra 1, San Jose Gr, Share 6, sd 2687 ft. Conroe Drlg. Co.'s (Heep Oil Corp.) Guerra 1, Blk 35, Crawford sub of Por 56, no rept. Danvers & Crawford's Hicks and Phelps 1, Pedernal gr, dr 950 ft. Great Plains Oil Co.'s Sanchez 1, sur 344, td 3760 ft, reinstate to dd. J. T. Kyle et al's Garcia Land and Cattle Co. 1, 4500 ft sl, 1050 ft wl, Por 1000, midway between n and s l of Lot 4, lcn. Conway & Emanuel's Starr County Cattle Co. 1, Blk 57, Por. 89, sp. Henshaw Bros. & Simon & Weston's M. M. Garcia 1, Blk 9, sur 908, dr 2552 ft. J. F. Kennedy's Kelsey Bass 8, Blk 7, Por. 75-76-77, dr 735 ft. Lester & Duffield & R. H. Vice's E. B. Carruth et al 1, Share 1, Por. 91-92, dr 1800 ft. Merren, Johnson & Jeffries' Starr County Cattle Co. 2, Blk 37, Por 88-89, sand 2125-28 ft, shale 2528-31 ft, td 2531 ft, dst show sw and oil. C. L. Smith & Golston et al's J. M. Longfellow 1, Sec. 281, dr below 3850 ft. Sun Oil Co.'s Gonzales & Clark 1, Sec 372, TT Ry sur, td 5150 ft, r from 4693 to 5060 ft, to test with cone packer. Tarver & Kenedy's Starr County Cattle Co. 1, Blk 6, Sec. 11, Por. 75-76-77, fsh 710 ft. United Prod. Co.'s Guerra 1, Por. 55, coring 3410 ft. E. L. Younkins' Kelsey Bass 1, Blk 19, Por. 87, sd 2572 ft.

TRAVIS COUNTY — Barron & McGee's Lundgren 1, L. Kimbro sur, dr 765 ft. Mims, New & Anderson's Bohm 1, Dolvalle sur, sd 515 ft. C. A. Stubbs' Kerlin 1, Isaac Lindsay sur No. 61, sd 700 ft. J. C. Tittle et al's A. G. Johnson 1, L. Kimbro sur, dr 710 ft.

VICTORIA COUNTY — The Texas Co.'s I. Foster 1, Sec. 10, F&NO Ry sur, td 3100 ft, ran wild, est 100,000,000 cu ft gas with 8000 sw per day, abnd, and making new lcn.

WEBB COUNTY—O. W. Killam's Bruni 1, 200 ft nl and wl, Blk 55, Albercas Gr, dr 500 ft. State Oil Co.'s Yeager 11, Share 5, Las Animas Gr, milling 3456 ft.

WILLACY COUNTY — South Texas Dec Co.'s (W. T. Daniels et al) F. Armendiez 1, Share 4, mim. W. W. Silk's Stillman 1, Lot 16, Blk 130, Stillman Ranch sur, lost hole 2000 ft, will skid over for new test.

ZAPATA COUNTY—Merle Gunby's Alice D. Haynes 4, Blk 4, Las Comitas Gr, sp. O. W. Killam's A. M. Bruni 9, Blk 9, Blas Uribe tr, Borrego gr, dr 275 ft. A. H. Wray's Gopher Trust Est. 5, Blk 12, Sec. 1, San Ignacio sub, Borrego gr, dr 1406 ft.

ZAVALLA COUNTY—Humble Oil & Ref. Co.'s R. L. Ball & Co. 1, Luciana de la Garza sur, dr 1872 ft, chalk.

TEXAS GULF COAST

AUSTIN COUNTY — Quantana Pet. Co.'s L. S. Hillpoldt 1, M. N. Allen sur (56-ac), cored salt water sand 4507 to 4512 feet, dr shale 4537 feet.

BRAZORIA COUNTY — Amerada Pet. Corp.'s Houston Farms Dev. Co. 1, L. G. Bachelder sur, washing over drill pipe 7275 ft. C. R. & G. Drilling Co.'s Truksa 1, H&TB sur, sec 7 (75-ac), standing 7874 ft. Stanolind Oil & Gas Co.'s J. W. Surface 1, A. C. H. & B. sur, abst 462 (75-ac), washing well in to complete, td 5990 ft.

CHAMBERS COUNTY — Humble O&R Co.'s A. Middleton 1, H&TC sur, sec 58, set casing 2340 ft. Sun Oil Co.'s Hamilton 1, T&NO sur, sec 128 (640-ac), dr shale 6527 ft.

FT. BEND COUNTY—Benedum Trees Oil Co.'s Hensler 1, Chas. Sayer sur (223-ac), dr salt water sand 6500 ft.

GRIMES COUNTY—Herbert Holt & Sam B. Freund's M. O'Brien 1, Moses Evans sur (20-ac), shut down 3080 ft. Marshall et al's J. W. Dodd 1-B, T. Jones sur (150-ac), dr shale 2025 ft.

HARRIS COUNTY—Red Bluff Oil Co.'s Saureau 1, Wm. P. Harris sur, dr shale 1734 ft. W. U. Paul's House 1, M. Magruder sur, fsh 7329 ft. T. S. & F. Oil Co.'s J. B. Hines 1, A. McCormick sur (63.33-ac), dr shale 1290 ft. American Liberty Oil Co.'s Graves 1, J. W. Bryan sur, dr shale 2450 ft.

HOUSTON COUNTY — Boone Brothers' Tex. L. L. L. Co. 1, F. Martinez sur, no report. Same operator's Trinity State Bank 2, C. McEllis sur, completed 52 barrels per hour. Humble O&R Co.'s Shaw 3, C. McEllis sur, preparing to drill ahead 1990 ft.

JEFFERSON COUNTY—Navarro Oil Co.'s C. R. Toliver 1, S. Morris sur, dr shale 4510 ft. Sun Oil Co.'s Long 1, J. Blair sur, dr shale 8849 ft.

LIBERTY COUNTY—Extension Oil Co.'s J. A. Lovett 1, P. P. Devers sur, dr sand 3901 ft. Liberty Independent Oil Co.'s J. M. Neal 1, S. Strong sur (100-ac), dr shale 3233 ft. Jack Frazier's Lynotte Buffon 1, James Robeson sur (865-ac), preparing to either abandon or core 500 more feet, td 7511 ft. Black Gold Prod. Co.'s R. D. McDonald 1, Cleveland area, lcn.

LOUISIANA GULF COAST

ACADIA PARISH—Humble O&R Co.'s Rice Milling Co. 1, s of Crowley field, sec 27-10s-2e, dr shale 5709 ft. Superior Oil Producing Co. & Woodley Petroleum Co.'s Dr. Newman 1, Churchpoint, sec 24-7s-1e, mim.

AVOYELLES PARISH—Southern Star Pet. Co.'s I. G. Boyette 1, sec 28-3n-5e, ru.

BEAUREGARD PARISH — Gulf Refining Co.'s Lutcher Moore 1-A, 7½ mi nw of DeQuincey, sec 25-6s-12w, abd 8354 ft.

CAMERON PARISH—The Texas Co.'s Calcasieu Lake 10-A, Calcasieu Lake, sec 1-14s-9w, dr anhydrite 6784 ft. Same operator's Jessen 1, one mi s of Calcasieu Lake, sec 24-14s-10w, fsg 4551 ft.

CALCASIEU PARISH—Humble O&R Co.'s Industrial Lbr. Co. 1-B, Big Woods area, ne of Starks field, sec 27-8s-12w, dr sand 8019 ft. Plummer & McDaniels' Couburn-Hood 1, midway between Edgerly field and Vinton field, sec 13-10s-12w, dr shale 3080 ft. Wheeler Oil Co.'s W. B. Gabbert 1, approximately four mi sw of Iowa field, 7½ mi e of Lake Charles, sec 28-9s-7w, dr shale 6010 ft.

EAST FELICIANA PARISH—Thompson Creek Oil Co.'s Fanny Noland 1, on e bank of Thompson Creek, sec 70-1s-1w, shut down 1485 ft.

EVANGELINE PARISH — Humble O&R Co.'s Hattie Hass 1, three mi nw of Reddell, sec 22-4s-1w, dr sand 7106 ft.

JEFFERSON DAVIS PARISH—Strake Oil Corp's Calcasieu National Bank 1, three mi sw of Woodlawn, sec 12-9s-6w, dr shale 6371 ft.

LA FOURCHE PARISH—Barnsdall Oil Co.'s Herang Plantation 3, 1300 ft due e of Harang Plantation 1, sec 97-17s-20e, dr shale 4790 ft. Emerald Pet. Co.'s Bowie Lbr. Co. 1, ne of Bayou La Fourche, sec 53-15s-18e, dr shale 4704 ft.

ST. BERNARD PARISH—J. Danciger's Battles 1, sec 135-14s-14e, dr lime 6001 ft.

ST. MARTIN PARISH—The Texas Co.'s St. Martin Land Co. 6, 2 mi ne of Henderson, sec 17-8s-7e, shut down 4641 ft.

ST. MARYS PARISH—Edwards Drilling Co.'s Chetemaches 1, near Charenton, sec 34-13s-9e, td 6501 ft, pb now dr shale 3321 ft.

NORTH LOUISIANA

BIENVILLE PARISH—Duncan & Fuller's J. Hutton 1, nw nw 4-18n-7w, dr 1090 ft shale. Saline Drilling Co.'s Pardee 1, ne ne 27-14n-6w, elev 162.4 ft, base Annona chalk 2508 ft, dr sandy shale 2570 ft.

BOSSIER PARISH — Jno. L. Anderson, Tr.'s Leonard 1, sw sw 19-19n-13w, owdd, td 3670 ft. Joe P. Dixon's Sentell-Dickson 1, se nw 10-20n-13w, dk. Howard & Bird's Sam Gold 1, nw ne 36-20n-13w, arr res, td 1126 ft. The Leonard Co.'s Pearson 1, nw se 22-21n-14w, dr 2250 ft. L. R. Skidmore's Davis 1, se se 12-18n-13w, sd 1240 ft.

CADDO PARISH—Ed Bailey et al's Hartzo 1, ne nw 28-22n-16w, dk. California-La. Dev. Co.'s W. E. Glassell 1, sw sw 29-20n-14w, dk and rog.

CATAHOULA PARISH — T. R. Hincey's La. Cent. Lbr. Co. & Tensas Delta Lbr. Co. 1, sw ne 32-9n-6e, sd for ds 1535 ft.

CLAIBORNE PARISH—K. C. Bundy et al's J. K. King 1, 12-21-7w, dk. J. K. Wadley's W. W. Moreland 1, 2-22n-7w, dk.

DE SOTO PARISH—Century Oil & Drilling Corp.'s J. M. Norton 1, sw ne 27-11n-14w, elev 244 ft, base Annona chalk 1776 ft, dr 2241 ft, sandy shale. Dempsey & Manziel's Thigpen 1, sw ne 33-13n-13w, ds stuck 1730 ft. E. L. Foster et al's Youngblood 1, ne ne 9-11n-14w, dr 1680 ft. Hester et al's Alston 1, ne sw 11-11n-16w, sdtr 2620 ft. Geo. Le Grande's Vance 1, 34-12n-16w, dr 2550 ft. McCormick et al's Harris 1, sw se 11-13n-14w, mim.

EAST CARROLL PARISH—Century Oil & Drilling Corp.'s Olivedell Plantg. Co. 1, ne ne 56-21n-12e, dk.

NATCHITOCHES PARISH—Benedum & Trees Oil Co.'s Carver Est. 1, se se 6-8n-7w, dr 5175 ft. Clyde Creighton's Friedman 1, swc 52-7n-6w, dr 1700 ft. Jack Lent's Brown Lbr. Co. 1, ne sw 27-9n-9w, pb to 2470 ft, wocs, old td 3002 ft. Roy Raines et al's Raines 1, sw sw 28-9n-10w, co to deepen 2605 ft. B. E. Taylor's DeBlieux 1, 83-10n-7w, dk.

RED RIVER PARISH — Louis L. Glass'

STONE OIL TOOL COMPANY
HOUSTON, TEXAS
SOTCO
U.S.A.

RENTAL TOOL SERVICE

ROTARY FISHING TOOLS

DRILL PIPE AND CASING CUTTERS

1502 MAURY ST. PHONE C-6329
Night Taylor-7674 — Taylor-9838

FOR FURTHER INFORMATION SEE COMPOSITE CATALOG

THE FORT WORTH LABORATORIES
Field Gas Testing. Analysis of oil field brines, gas, minerals and oil. Sell Thermometers, Hydrometers and Laboratory Glassware.
F. B. Porter, B.S., Ch. E., Pres.
R. H. Fash, B.S., Vice-President
828½ Monroe St., Ft. Worth, Tex.

INDEPENDENT EXPLORATION COMPANY
Seismograph Surveys
2011 Esperson Building
Houston Texas

PATENTS
Patents, Trade Marks, Copyrights and Infringement Litigation
HARDWAY & CATHEY
428-29-30 Bankers Mortgage Bldg.
Phone Fairfax 8232 Houston, Texas

HIRSCH, SUSMAN AND WESTHEIMER
ATTORNEYS AT LAW
32nd Floor Gulf Building
Houston, Texas
Specializing in Oil Law and Land Law

PATENTS
JESSE R. STONE
and LESTER B. CLARK
Patents, Infringement Litigation, Trade Marks
Associated with
Andrews, Kelley, Kurth & Campbell
2200 Gulf Bldg. Houston, Texas
Capitol 7245

Coming to
PHILADELPHIA?
Rooms with Bath for $2.50
HOTEL
PENNSYLVANIA
39TH *and* CHESTNUT STREETS

SPECIALIZED

The OIL WEEKLY solicits and will accept subscriptions only from those who actually are engaged in production and transportation of oil and gas.

RESTRICTED

G. H. Dickson 1, nw se 32-12n-8w, owdd, td 1064 ft. Sterling O&G Co.'s Long-Bell Lbr. Co. 1, se ne se 19-13n-9w, rur.

SABINE PARISH—R. L. Gay, Tr.'s Long-Bell Lbr. Co. 4, ne ne 5-8n-13w, rur. Tex.-La. Ark. Oil Co.'s Pickering Lbr. Co. 1, ne sw 3-3n-12w, top Wilcox 2192 ft, dr 2720 ft.

WEBSTER PARISH—W. N. Neely's R. B. Slack 1, nw nw 12-22n-11w, dk. Geo. Weatherbee's Clark 1, nw ne 1-18n-10w, dk.

ARKANSAS

ARKANSAS COUNTY—Grand Prairie Dev. Co.'s Fischer 1, nw ne nw 6-6s-4e, dr 1825 ft.

CALHOUN COUNTY—R. J. McMurry et al's Calion Lbr. Co. 1, se se 33-15-14, rur.

HEMPSTEAD COUNTY—Dr. E. L. Austin's J. W. McWilliams 1, nw sw 19-13-23, sd 2300 ft. F. W. Martin & Co.'s Lafferty 1, se nw 17-14-24, pb to 2200 ft, old td 3670 ft.

HOT SPRINGS COUNTY—R. E. Morris' Morris & Lang 1, sw sw 19-6s-17w, spd and sd.

LA FAYETTE COUNTY—W. H. Harvey's A. M. Allen 1, ne sw 18-19-24, 2500 ft oih, wosr 2781 ft; A. M. Allen 2, se sw 18-19-24, sd repr rig 400 ft. Kamon & Neely's Red River Lbr. Co. 1, sw sw 26-19-25, rur. A. H. & A. F. Tarver's Russell 1, ne nw 12-17-25, sd 3010 ft.

LONOKE COUNTY—J. C. Strahan's Hardin 1, nw nw 18-2s-7w, co to deepen, td 820 ft.

MILLER COUNTY—Bloomburg Oil Corp.'s Patterson 2, se ne 5-19-28, lcn. King Oil Corp.'s C. H. Schroder 1, sw ne 24-14-28, dry 2990 ft, sd 3020 ft. Rhone Ford & Goodwin's Frost Est. 1, se se sw 8-15-26, wocs 10-in csg 120 ft. Lee Timberlake's Frost Est. 1, sw sw se 27-15-26, sd 1350 ft.

OUACHITA COUNTY—T. J. Gaughan et al's M. Bragg 1, ne se 25-13-18 (amended lcn formerly carried nw sw 30-13-17), 150 ft oih wosr, td 1394 ft; Cartier 1, nw se se 25-13-18, rur.

UNION COUNTY — E. R. Henderson's Vines 2, nw sw se 29-18-14, sp 10-in csg 82 ft, dr 960 ft. Mrs. R. J. Jones' J. Davis 1, nw nw 28-16-14, sdtr, cored sand so in new hole 2758 ft, old td 2765 ft, arr set csg. Jovian Oil Co.'s Perdue 1, 3-17-14, sd 3522 ft. C. H. Murphy et al's Union Sawmill Co. 1, nw se 29-18-11, dk, and mov in rig. Reuter Oil Co., Inc.'s Kinard 1, nw se nw 32-18-14, wosr, td 2189 ft. Geo. L. Pace's Union Sawmill Co. 1, ne ne sw 24-18-12, spd.

WOODRUFF COUNTY—L. P. Lively's P. Perkins 1, sw se se 5-5n-2w, rur.

ALABAMA

COVINGTON COUNTY — Geometer Prod. Corp.'s A. B. Culbreth 1, sw sw ne 8-2n-14e, dk and mim.

CONECUH COUNTY—Ray L. Estabrook's Miller Lbr. Co. 1, w½w½ ne 1-4n-12e, mim.

HOUSTON COUNTY — Rice O&G Co.'s Oakley Est. 1, nw sw 9-3n-29e, sd 2506 ft.

LAMAR COUNTY — DeSoto O&G Co.'s Gardner 1, nw nw 22-15s-16w, sd 4182 ft.

PIKE COUNTY — Alabama Drilling Co.'s Faulk 1, nw nw 31-11n-21e, dk and mim.

MISSISSIPPI

CLARKE COUNTY—Clarke County Oil Co.'s Dora Butler 1, sw sw 15-2n-16e, rur.

GREENE COUNTY—United Gas Pub. Serv. Co.'s School Board 1, w½w½ 16-1n-5w, dr 5305 ft.

HARRISON COUNTY — Big Ridge Oil Co.'s Hingin 1, 13-7s-10w, sd for csg 1100 ft.

ISSAQUENA COUNTY — Pelican Oil & Gasoline Co.'s Martin G. Bender 1, 11-12n-8w, coring 3190 ft.

MONROE COUNTY—P. J. McAlpine et al's Frank Rye 1, ne sw 15-15s-17w, cored sand 2905-12 ft, sg, did not test, dr 2926 ft, white sand and red shale; Crook 1, ne ne 4-13s-18w, dr 1002 ft, lime and slate.

MONTGOMERY COUNTY—D. C. Shaffer et al, Fee not given, 31-19-7w, lcn.

PEARL RIVER COUNTY—Gulf Ref. Co.'s Goodyear-Yellow Pine Lbr. Co. 1, 23-2s-17w, dr 3105 ft.

SIMPSON COUNTY—Berry Corp.'s R. T. Berry 2, sw sw 33-2n-4e, 6⅝ in csg 2048 ft, blg 2064 ft.

STONE COUNTY—Gulf Ref. Co.'s Dantzler Lbr. Co. 6, sw sw 22-4s-11w, dr 6300 ft.

WASHINGTON COUNTY — Perkins & Dee's Lee 1, 33-15s-8w, co to deepen 300 ft.

TENNESSEE

DECATUR COUNTY — Steinberger & Pierce's Montgomery 1, arr use acid, td 1605 ft.

FAYETTE COUNTY—Hay-Fay O&G Co.'s Morrison 1 (1 mi n Laconia), dr 1961 ft rock. Mike Kissick's Claxon 1 (9 mi n Somerville and 7 mi s Stanton), dr 1600 ft. Mid-Continent Dev. Co.'s Smith 1 (2 mi s Dancyville), rur.

HAYWOOD COUNTY—E. Randall Henderson's Jarrett 2 (1½ mi s Brownsville), 6⅝ csg cemtd 2182 ft (corrected depth), dr 2250 ft chalk.

SHELBY COUNTY—Clarence Garrett et al's Gillespie 1 (1 mi s and 2 mi e Brunswick), dk and mim.

MICHIGAN

MIDLAND COUNTY—Goll - Graves - Mechling's Oviatt 1, 16n-2e, sec 24, sd 600 ft. Howard Patterson's Haskins 1, 13n-2e, sec 26, dr 3300 ft. Daily Crude Oil Co.'s Martin 1, 13n-1e, s-nw, sec 28, lcn. Atha Oil Co.'s La Londe 1, 13n-1e, c-nw sw-27, lcn; Beougher 1, 13n-1e, c-nw sw-25, lcn.

ISABELLA COUNTY—Pen-Yan Oil Co.'s Ackerman 1, 16n-4w, sec 12, dr 150 ft. A. R. Morris' Hart 1, 15n-3w, sec 18, dr 3812 ft. G. G. Hanner's Dargitz 1, 13n-4w, sec 20, sd 325 ft. Pure Oil Co.'s Baker 1, 13n-5w, sw nw se-15, rig.

OGEMAW COUNTY — Muskegon Oil Corp.'s Wilson 1, 22n-1e, sec 24, testing so at 2768 ft. Lupton Oil Co.'s Rakestraw 1, 24n-3e, sec 35, rig. McClanahan Oil Co.'s Buffalo Ranch 1, 21n-3e, sec 7, lcn.

MONTCALM COUNTY — L. E. Duvall's Eiknorch 1, 11n-10w, sec 13, fsg 1250 ft. J. W. Leonard's Durbin 1, 10n-5w, sec 11, dr 420 ft. Golden Oil Co.'s Steffensen 1, 10n-8w, sw sw se-5, rig.

MECOSTA COUNTY — Gordon Oil Co.'s Brisboy 1, 13n-7w, sec 8, sd 1650 ft. Columbia Oil Co.'s Arnett 1, 13n-8w, sec 23, sd 1310 ft. Jetter Oil Co.'s Parsley 1, 14n-10w, sec 19, rig. Vale and Ward's Flowers 1, 15n-7w, sec 33, sd 350 ft. Consumers Royalty Corp.'s Case 1, 15n-7w, sec 23, rig. J. A. Scheibe's Nutt 1, 15n-7w, c-nw se-13, lcn. Lakeside Oil and Gas Co.'s Dye 1, 15n-8w, ne ne-23, lcn.

ROSCOMMON COUNTY—Black Diamond Pet. Synd.'s Vaughan 1, 24n-4w, sec 28, dr 420 ft.

KENT COUNTY—Bryan and Martin's Aldrich 1, 8n-11w, sec 3, dr 200 ft.

ALCONA COUNTY—Black River Oil Co.'s Ranger 1, 28n-9e, sec 22, sp.

MASON COUNTY—Dragon Development Co.'s Young 1, 17n-5w, sec 15, sp.

GRATIOT COUNTY — Mid State Dev.'s Yost 1, 12n-2w, sec 27, sd 4390 ft.

SAGINAW COUNTY — Chapin Oil Co.'s Sutlif 1, 9n-1e, sec 16, sd 2500 ft. Fred Turner's Sunrise Farm 1, 10n-4e, sec 6, dr 2450 ft. Great Northern Oil Co.'s Olmstead 1, 13n-3e, sec 23, rig.

CHIPPEWA COUNTY — F. D. Barton's Krettan 1, 41n-7e, sec 8, lcn.

LAPEER COUNTY—Clyde Newnon's Herklotz 1, 8n-10e, sec 28, rig. C. M. Holly's Thom 1, 8n-9e, sw ne ne-9, lcn.

ALLEGAN COUNTY—Bear Creek Development Co.'s Fors 1, 3n-14w, sec 29, rig.

BAY COUNTY—Webber Oil Co.'s Stepanski 1, 15n-4e, sec 14, dr 3400 ft.

LENAWEE COUNTY — P. D. Snavely's Lindsay 1, 7s-3e, sec 6, dr 250 ft.

SHIAWASSEE COUNTY—John Hurley's Van Pelt 1, 8n-2e, sec 35, sd 1800 ft. Geoysyn Oil Co.'s Hnevsa 1, 8n-2e, sec 34, dr 1830 ft. D. H. Dornell's Hardy 1, 6n-4e, sec 7, dr 1700 ft.

LIVINGSTON COUNTY—H. Snell's Zebb 1, 2n-5e, sec 34, sd 5017 ft. Talbot Oil Co.'s McPherson 1, 3n-4e, sec 35, Niagra 2375, dr 3400 ft.

ST. CLAIR COUNTY—P. D. Bornman's Boldt 1, 8n-16e, sec 28, lcn.

MANISTEE COUNTY — T. K. Buzard's (formerly Fischer-Robbins) Chamberlin 1, 24n-16w, sec 14, so 1085 ft, setting 6-in csg for test.

NEWS *from the Industry's* EQUIPMENT MAKERS

Scarratt Is New International Harvester Automotive Chief

In recognition of his conspicuous achievements as chief engineer in charge of motor truck engineering for International Harvester Company since 1927, A. W. Scarratt has advanced to the position of chief engineer in charge of all the company's automotive engineering activities.

Besides supervising engineering developments of motor trucks as heretofore, Scarratt will have charge of similar work on McCormick-Deering tractors and stationary and portable power plants.

From 1914 to 1926, Scarratt was prominently identified with tractor engineering work, holding the position of tractor engineer and later chief mechanical engineer for a well-known manufacturer. Prior to that, he was engaged in railway engineering work and just before joining the Harvester organization in 1927 was chief engineer for Hyatt Roller Bearing Company.

Specially worthy of mention is the development under Scarratt's direction of the recently announced streamlined International C trucks, consisting of nine new models from ½-ton to five-ton size.

Scarratt has long been very active in the Society of Automotive Engineers, being for several years a member of the motor coach and motor truck committee and of the lubricants division committee.

W. D. REESE

A. W. SCARRATT

W. D. Reese, who recently joined the International Harvester organization as Mr. Scarratt's assistant, succeeds him as chief engineer of motor truck engineering. Reese is well known in the motor truck engineering profession and has been prominently identified with the Society of Automotive Engineers, being at present a member of the society's truck rating committee and the rim committee.

After graduation from Lehigh University in 1916, Reese became a research engineer for Remington Union Metallic Cartridge Company. From 1917 to 1919 he was in the research department of Locomobile Company. In 1919 he joined the engineering staff of Fifth Avenue Coach Company and in 1922 became affiliated with Yellow Truck and Coach Company, being chief engineer of the company's Yellow Sleeve Valve Engine Works. From then on until he joined the Harvester organization, his time was spent on important phases of engineering development work.

Lucey Products Company Moves to New Headquarters

F. E. Bernsen, president of Lucey Products Company, has announced removal of office headquarters from 224 East Brady Street to 910 South Boston Avenue, Tulsa. They will occupy the eighth floor of the recently named Tradesmen Building, which formerly was known as the Genet Building.

A. P. E. S. Association Adopts Emblem

The American Petroleum Suppliers' Association, composed of practically the entire industry in the United States of which the name is descriptive, has adopted an official emblem to be displayed exclusively by members. It is anticipated at association headquarters in Houston and Los Angeles that this emblem will come into wide use in members' trade-paper advertising, catalogs, stationery, etc.

The emblem serves the purpose of readily identifying members of the association and signifies their adherence to the code of fair trade practices and business standards, which the association is sponsoring. Members have been quick to sense the value of displaying the emblem and already it is appearing in the printed matter and advertising of numerous leaders in the supply field.

The emblem is furnished to members for a very nominal sum and is supplied in electrotype form. Two standard sizes have been adopted, of approximately three quarter-inch and seven-eighths-inch diameter. Both sizes are available for one or two color printing.

The emblem was designed by Robert R. Berry.

Worthington Establishes Regional Headquarters on the West Coast

Worthington Pump and Machinery Corporation recently has established a Pacific Coast regional headquarters at Los Angeles, which will center jurisdiction and development of the corporation's business in the western terrain now included in the coverage of the Worthington district offices in Seattle, San Francisco, Los Angeles and El Paso.

This headquarters, under the direction of an executive officer of the corporation, will supplement the efforts of the present district offices and unite with them for the dispatch of business and service. C. E. Wilson, vice president, is in charge of this Pacific Coast division, and accordingly has moved his office from New York to new headquarters at 510 West 6th Street, Los Angeles.

Mr. Wilson has for many years been

well known in the pump and power equipment field, having in his earlier experience filled many important offices in the various departments of the former Geo. F. Blake Manufacturing Company and its successors, which subsequently became a part of Worthington.

After a considerable period in charge of sales in the U. S. Central district with headquarters at Chicago, Mr. Wilson returned to New York as assistant general sales manager in charge of all foreign and export business, in which capacity he traveled extensively abroad and in South America. In 1923 he was made general sales manager of Worthington and in 1932 was elected a vice president of the corporation.

Carl W. Vogt, Shaffer Tool Works, Is Touring Europe

Carl W. Vogt, Mid-Continent and Gulf Coast manager for Shaffer Tool Works, Brea, California, is on a combination business and pleasure tour of Europe that will last three months. Mr. Vogt will make calls in London, The Hague, Germany, Roumania and other European oil centers.

Mr. Vogt recently was married to Miss Myrtle Jones, who has been secretary and office manager of Shaffer Tool Works, and the trip is a combination honeymoon and business one. Prior to leaving for New York to sail aboard the S.S. General Von Steuben, they were entertained at a wedding supper and dance given by Mr. and Mrs. E. G. Lenzner at the home of Chase E. Sutton, branch manager of The Pure Oil Company in Houston, in which city Mr. Vogt maintains headquarters.

CARL W. VOGT

CHARLES S. LOCKWOOD

Hyatt Roller Bearing Company Honors 60-Year Man

On the evening of December 18 the executive staff and department heads of Hyatt Roller Bearing Company gave a testimonial dinner to Charles S. Lockwood, 83-year-old member of its forces. He has just completed 60 years of continuous service in the employ of John Wesley Hyatt's several enterprises, 42 years of which have been with Hyatt Roller Bearing Company of Newark, New Jersey, since its inception. The dinner was held at Newark Athletic Club, with nearly a hundred of the Hyatt men present. Several of them have been associated with the guest of honor for more than a quarter of a century.

It was in 1874 when Mr. Lockwood, a young man in his twenties, went to work in the Newark experimental laboratories conducted by John Wesley Hyatt. Throughout these 60 years upward to 100 patents have been issued in Mr. Lockwood's name. This is indicative of the important part he played in the various Hyatt experimental and production activities.

To have labored side by side over a number of years with an inventive genius like Mr. Hyatt is a privilege not accorded to many. Then to live on and see one's endeavor put into such practical and universal use and to be actively engaged in their further development is a still more rare distinction which Mr. Lockwood enjoys.

Notable among the John Wesley Hyatt inventions, which his more than 300 patents represent, are the roller bearing, celluloid and several of its by-products, also water filtration systems, grinding and cutting machinery, and many other chemical and mechanical achievements. The several medals of honor from scientific and engineering societies accorded to Mr. Hyatt during his life are impressive testimonies of the great things he accomplished.

While working on one of their last major development projects the roller bearing was conceived. A friction problem they encountered had to be overcome and a bearing employing the roller principle was evolved. It worked so well for their purpose that they decided to apply for patents and manufacture this bearing for general use. Thus in 1892 Hyatt Roller Bearing Company was formed to build and sell the product which bears the inventor's name.

After a few years, Mr. Hyatt, who was then over 70, retired from active service and Mr. Lockwood carried on in charge of Hyatt Roller Bearing experimental laboratories. Today, a few months from his eighty-fourth birthday, Mr. Lockwood, still hale and hearty, is an active member of the Hyatt experimental staff. With all the glory that is his to talk about, it is difficult to get him to discuss the past because he is so keenly interested in the present and the future.

Two Large Orders for Pumping Units Placed with Waukesha

One of the largest single orders for oil field pumping engines ever placed has just been booked by Waukesha Motor Company for use in California. Fullerton Oil Company, on its lease at Montebello, California, will install 27 pumping units, all made by this firm. Smith-Booth-Usher Company of Los Angeles took the order from Fullerton Oil Company, and a number of the units were delivered from Los Angeles stock.

The engines are 20-30 horsepower, Ricardo head, four-cylinder type, arranged for radiator cooling and drive through a clutch and power take-off. Natural gas carburetors and magneto ignition have been applied, and like other units of this type, they will be installed in the open.

There also is reported by Waukesha Motor Company another large order for pumping engines to be shipped to South America. This is an order for 15 pumping units placed by Standard Oil Company of New Jersey within the last 10 days, and shipment will be made before the holidays.

These engines are 25-35 horsepower, completely housed independent units with radiator cooling, removable panel side doors, and clutch type power take-off drive. They are mounted on sliding rails and skids for belt adjustment, and are provided with Zenith natural gas carburetors, magneto ignition, air cleaners, oil filters, and other standard accessories.

Waukesha Motor Company reports that its oil field business has shown a very pronounced increase in the last six months, and continues to show improvement from month to month.

New Equipment for the Field

Machinery .... Tools .... Catalogs .... Books

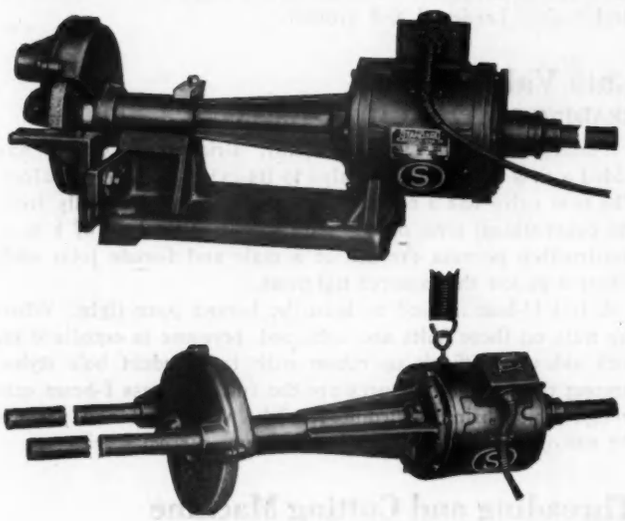
▼ ▼ ▼

Bench and Aerial Grinder

THE STANDARD ELECTRICAL TOOL COMPANY

The Standard Electrical Tool Company, 1938-48 West Eighth Street, Cincinnati, Ohio, has developed a unique utility tool for oil field service. This is the combination bench and aerial grinder.

The bench stand provides for easy mounting of the aerial



Standard Electrical Grinders

grinder so that it can be used for tool sharpening, grinding of castings, etc. When removed from the stand it is a portable outfit for grinding castings, welds and other portable grinding in the oil fields.

The machine is furnished with a suspension spring and the guard may be equipped with handle to provide for some pecularities of work.

The grinder is made in ½, 1, 2 and 3 horsepower sizes.

Welding Machine

THE LINCOLN ELECTRIC COMPANY

The Lincoln Electric Company, Cleveland, Ohio, announces a new alternating current welder which will be known as the Lincoln "Shield Arc AC." This new welder is of revolutionary design and is of the motor generator type which takes two phase or three phase alternating current of standard voltages and frequencies and converts it into alternating current of lower voltage and at that higher frequency most suitable for arc welding with either heavily coated or washed electrodes in all positions, the manufacturer states. This principle, exponents of AC welding say, is an innovation which makes the new type of machine a commercially practical type.

For this equipment, the manufacturer claims the following advantages over the usual AC transformer type of welder:

(a) Improved arc characteristics due to the higher frequency such as more stable arc, less magnetic blow, easier starting of arc.

(b) Improved weld metal since there is less spatter loss and in multiple pass welding greater density.

(c) Better power characteristics from the line. Since the machine takes power from all phases instead of from one phase, unbalancing of phases is eliminated and a power factor of approximately double that of the transformer type is obtained.

The new "Shield Arc AC" welder is built in portable and stationary AC motor driven models in two sizes. The smaller capacity machine can be used for continuous welding with electrodes of 3/32-inch to 5/16-inch in size; the larger capacity welder handles electrodes from ⅛ to ⅜-inch in size. These machines are wired for 220, 440 or 550 volts, AC supply, two or three phase, 50 and 60 cycles.

SWAB

KIBELE MANUFACTURING COMPANY

Kibele Manufacturing Company, San Antonio, Texas, is now manufacturing the Kibele one-cup casing swab so that, by the addition of a Kibele secondary cup assembly, the one-cup swab can be readily converted into a two-cup swab.

The conversion from a single-cup to a two-cup swab is accomplished merely by removing the bottom valve cage of the one-cup swab, adding the secondary cup assembly, and replacing the cage.

This convenience to swab users has been effected by the manufacturers in order to offer the operator what he needs for his particular job, Kibele recommending the two-cup swab for certain types of work, notably straight-water pulls from considerable depths.

Another new feature offered by Kibele casing swabs is the alternate cup assembly which, when substituted, changes any Kibele casing swab to a larger or smaller size. In this way any Kibele casing swab can be quickly made to run in larger or smaller pipe.

Hoist

EDELBLUTE MANUFACTURING COMPANY

Edelblute Manufacturing Company, Reynoldsville, Pa., has developed a new product known as the "Anchor" puller-hoist. It was designed to fill the need for a pulling jack that can also be used for overhead lifting. It employs a lever operated mechanism, using a simple principle of leverage, working on a ratchet-toothed chain sprocket wheel, and a load chain with a swivel hook.

The jack is automatic reversing, and the load can be pulled or lowered a notch at a time by turning the "reverse latch" to its proper position. Hoisting speed is from two to four feet per minute. It is made in one size only for a rated capacity of 1½ tons. The hoist weighs only 29 pounds.

Plungers

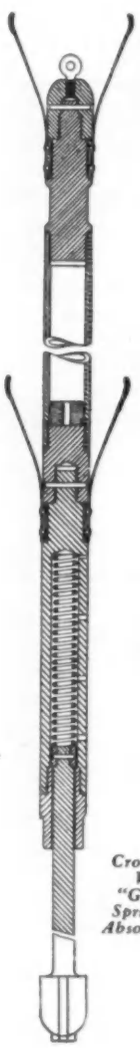
AXELSON MANUFACTURING COMPANY

Axelson Manufacturing Company, Los Angeles, California, is offering the "Axelson Superservice Hardened Steel Grooved Plungers" as a companion to the hardened steel liners manufactured by the company. The manufacturer claims that many difficulties encountered in pumping from deep zones can be successfully handled by these plungers.

This plunger has been developed as the result of a definite demand on the part of production engineers and field men. It

You can't put a crooked

HOLE *in jail*



A crooked hole *picks your pockets* . . . cuts down your profits, pushes up your costs. And *you* have to take the punishment. That's why it pays to keep holes straight with SYFO. That's why *you* pay when you "play along with luck."

The SYFO Clinograph is a remarkable device. The records afforded by SYFO Clinograph are direct and accurate records — records that are easily obtained *without the use of dangerous acids*—permanent records on paper that can be filed away for reference.

Write for descriptive literature and rates. Also operators of the Surwel Clinograph.

SPERRY-SUN WELL SURVEYING CO.

1608 WALNUT ST., PHILADELPHIA, PA.

Houston, Texas: 3118 Blodgett Avenue
Tulsa, Oklahoma: 402 Petroleum Building
Tyler, Texas: Peoples Natl. Bank Bldg.
Los Angeles, California:
415 Petroleum Securities Building

Cross Section View of "Go-Devil" Spring Shock Absorber Type

Sectional View of a SYFO Clinograph

SYFO CLINOGRAPH

(U. S. Patent 1,962,634, and others pending)

incorporates a series of grooves which it is claimed materially reduces friction, increases production, and improves the sealing effect of the fluid between liner and plunger. The plungers are made to the diameters required for rod and tubing sectional liner type pumps.

Pump Liner

MacCLATCHIE MANUFACTURING COMPANY

A new pump liner has recently been placed on the market by MacClatchie Manufacturing Company of Compton, California. According to the manufacturer they own patents which give them the sole right to manufacture a renewable steel liner embodying those features of their construction which make it possible to manufacture and sell at a low price.

The company states that the high quality and low price have made it possible to produce the liners in large quantities and thus have the raw material milled at the mill to their own sizes and specifications. The liners are made of seamless alloy steel tubing, hardened and ground.

Gate Valve

READING-PRATT & CADY COMPANY

Reading-Pratt & Cady Company, Bridgeport, Conn., has added a new type clip gate valve to its extensive line of valves. The new valve has a round bonnet and differs essentially from the conventional style of clip gate valves. This type of bonnet construction permits the use of a male and female joint with asbestos gasket that assures tightness.

A full U-bolt is used to hold the bonnet joint tight. When the nuts on these bolts are tightened, pressure is equalized on both sides, a difficult operation with independent bolt styles. Among the internal features are the full thickness I-beam cast wedge which brings sturdiness to the valve seat and permits the use of full size body guides to assure correct seating.

Threading and Cutting Machine

LANDIS MACHINE COMPANY

Landis Machine Company, Waynesboro, Pennsylvania, is offering a new type combination pipe and bolt threading machine for general maintenance work. The machine is of the lathe type, in which the work is revolved, and is designed to thread, ream, and cut off pipe, and thread bolts and rods. It is made in the motor-driven type only, employing a one horsepower motor and control of the industrial type. The Landis die head and patented chaser are used. A descriptive bulletin will be mailed upon request.

Some Aspects of Unit Operation Is Title of New Booklet

The Department of the Interior has announced the release of a publication entitled "Some Aspects of Unit Operation of Oil and Gas Pools and Fields," prepared by LeRoy H. Hines, assistant legal adviser, Office of the Solicitor and Geological Survey.

Oil and gas prospecting permits which have recently been issued or extended provide that the permittee must enter into a cooperative or unit plan under the act of March 4, 1931 (46 Stat. 1523) within a specified period. As considerable difficulty has been experienced by many permittees, lessees and others in formulating the required plans, this publication has been prepared primarily for their information and guidance.

Copies of the publication may be obtained from the Federal oil and gas supervisors at Tulsa, Oklahoma; Taft, California, and Casper, Wyoming, or from the Director of the United States Geological Survey, Washington, D. C.

Squeaks *from the* BULL WHEEL

The quack was selling an elixir which he declared would make men live to a great age.

"Look at me," he shouted. "Hale and hearty, I'm over 300 years old."

"Is he really as old as that?" asked a listener of the youthful assistant.

"I can't say," replied the assistant, "I've only worked for him for 100 years."

An aged negro saw an extraordinary looking instrument in an optician's shop. He gazed in open mouthed wonder, and turning to the optician, inquired: "What is it, boss?"

"That," replied the optician, "is an ophthalmometer."

"Sho'," muttered the other, his eyes still fastened on the curious looking thing as he backed out. "Dat's what I feared it was."

Murphy was taking his first flight in an airplane and when they were about 3000 feet up, the plane suddenly went into a nose-dive.

"Ha, ha," laughed the pilot, as he righted the plane. "Half of the people down there thought we were falling."

"Sure," said Murphy; "and 50 percent of the people up here thought so, too."

The preacher calling on one of the congregation was met at the door by little Johnny.

"Sonny, is your father home?"

"No, sir, Pop hasn't been home since Christmas when Mom caught Santa Claus kissing the cook."

"This is lovely soup."

"Oh, but you should have heard the kind mother used to make."

"Dey done stopped my pay down at de foundry."

"What fer?"

"Well, Ah think firin' me had somethin' to do wid it."

"Pat has worked himself up, hasn't he?"

"How do you mean?"

"He used to be a chiropodist, now he is a dentist."

"Johnnie," said the teacher reprovingly, "you misspelled most of the words in your composition."

"Yes'm," explained Johnnie; "I'm going to be a dialect writer."

"Uncle Mose, your first wife tells me you are three months behind with your alimony."

"Yes, jedge. Ah reckon dat so, but you see it's dis way. Dat secon' wife of mine ain't turned out to be the worker Ah thought she was gwine to be."

Do you serve crabs here?

We serve anyone; sit down.

A negro was arrested and brought before a commissioner for having a still on his premises. He was asked by the commissioner: "How do you plead?"

The negro said: "I pleads guilty and waives the hearing."

"What do you mean, 'Waive the hearing?'" asked the commissioner.

"I means I don't wanta heah no mo' about it."

"Dear, I've got something that I want to talk to you about."

"Good! Usually you want to talk to me about something you haven't got."

Have you any references?

No'm, but the husband of the lady I worked for last, said that I was entirely too good to be a maid in his house.

Six-year-old Jerry was pounding on the bathroom door, loudly demanding entrance. "But you can't come in while mother is in the bath, dear," protested his mother.

"Oh, let me in," he said impatiently, "I won't laugh; really I won't."

"Jack, are you sure it's me you love and not my clothes?"

"Test me, darling."

Doctor, my wife has insomnia very badly. She very often remains awake until 2 o'clock in the morning. What shall I do for her?

Go home earlier.

Mr.—Why don't you take your bank book in and have it balanced?

Mrs.—I should say not! Do you suppose I want that snoopy looking cashier to know how much money I have?

"I'm tired. I've been running around all day trying to get something for my wife."

"Didn't you get any offers?"

Greetings, men!

- May all your mechanical troubles be wells too big for your equipment.
- May all your financial troubles be banks too small for your profits.
- May all your friends be as staunch as our customers have been for more than 20 years.
- May the Doctors starve on the patronage of your households.
-

PELCO

PELICAN WELL TOOL & SUPPLY CO.

Lake Charles — Converse — Many — Monroe

Houma — Kilgore — Willow Springs

SHREVEPORT, LOUISIANA

FOR SALE
·Equipment·

2½-INCH LINE PIPE—25,000 feet of good quality 2⅛-inch, 11½-thread, Lapweld Line Pipe ready for delivery from Pampa, Texas yards. All or any part offered at favorable price.

2-INCH LINE PIPE—25,000 feet of extra good 1800-pound test 2-inch, 11½-thread Line Pipe ready for delivery from Houston, Texas yards. We also have ample quantities of good used 2-inch at various points throughout the territory and can make quick delivery to any location in Kansas, Oklahoma and Texas.

5-3/16-INCH LINE PIPE—15,000 feet, 13-pound, 11½-thread, good quality Line Pipe at original lease location near Muskogee, Okla. Attractive price on all or any part at salvage location before it is moved to regular stock points. Call Wichita Office or Tulsa Office.

6-INCH LINE PIPE—Just taken up, 25,000 feet good quality 6-inch, 20-pound, 8-thread Line Pipe. Ready for delivery anywhere from Tulsa. Call Tulsa Office or Wichita.

SURFACE PIPE AT KILGORE—Large quantities of 12½-inch, 50-pound, 8-thread Lapweld; and 10-inch, 35-pound, and 40-pound, 8-thread Lapweld Casing for surface pipe in Kilgore yards. Also several strings of 7-inch O.D. (6⅝) 24 and 26-pound Lapweld Casing and 5-3/16-inch, 17-pound Lapweld. Quality is good and price is right on all this pipe.

15½-INCH CASING—Large quantities of best grade of used 15½-inch, 70-pound Lapweld Casing on hand in Kansas yards convenient for delivery anywhere in the Kansas territory.

8¼-INCH SEAMLESS CASING—Approximately 2,500 feet of 8¼-inch, 32-pound Seamless Casing priced for delivery in Kansas territory.

5-3/16-INCH LAPWELD CASING—Several strings 11½-thread, 17-pound. Very best grade. Located in yard stocks that permit economical delivery to any location in Kansas or Oklahoma.

4½-INCH DRILL PIPE—Approximately 2,900 feet of 4½-inch Drill Pipe in 40-foot doubles with Tool Joints. Joints turned to 4¼ inch which can be used same as conventional joint. On account of having this joint, this lot of Drill Pipe is offered at a very low price. Also have about 500 feet good used 4½-inch Drill Pipe in 30-foot lengths which can be delivered anywhere in Kansas or Oklahoma.

3-INCH LAPWELD TUBING—A large quantity of 3-inch, Long Collar, Best Grade, Lapweld Tubing—both regular and upset. This material is still at the original line location and can be purchased before being moved to stock at a sizeable saving. For full information on this material contact Wichita Office.

Items listed here are intended to be only representative of what we have on hand. Our yards at various points in Kansas, Oklahoma and Texas are well stocked with practically every size, kind, and weight of Tubular products of all kinds. We are daily receiving more from salvage work and other sources, so if what you need is not listed here, call us. We are likely to have just what you want right in the locality where you want to use it.

(All material listed subject to prior sale)

WRITE OR WIRE OR PHONE STATION TO STATION

BRIDGEPORT

MACHINE COMPANY

WICHITA KANSAS

or any Bridgeport Store or Sales Office

Advertisers' Iedex

Abercrombie Pump Co.
American Askania Corp.
American Association of Petroleum Geologists
American Cable Co.
American Iron & Machine Works
American Roller Bearing Co.
American Steel & Wire Co.
B. K. Appleman
Ash Grove Lime and Portland Cement Co.
Athey Truss Wheel Co.
Atlas Glycerine Co.
Axelson Manufacturing Co.

Baash-Ross Tool Co.
Badgett Lubrication Corp.
Baldwin-Duckworth Chain Corp.
Baker Oil Tools, Inc. 13
Baroid Sales Co. 44
The Barrett Co.
William M. Barrett, Inc.
I. B. Beaird Corp.
Bowen Air Lines
Bradford Motor Works
Brauer Machine & Supply Co.
Breckenridge Chemical Co.
The Brewster Co.
Bridgeport Machine Co. 82
Broderick & Bascom Rope Co.
Burlington-Rock Island Railroad
Butler Manufacturing Co.
A. M. Byers Co.
Byron Jackson Co.

Cameron Iron Works
Caterpillar Tractor Co.
The Cavins Company 58
Central Power & Light Co.
Chain Belt Co.
Chemical Process Corp.
Clark Brothers Co.
Climax Engineering Co.
Continental Supply Co. Insert, 34-35
Fred E. Cooper Co.
Cooper Bessemer Corp.
The Corbett Corp.
W. H. Curtin & Co.

Darling Valve & Mfg. Co. 17
Dayton Rubber Mfg. Co.
Detroit Graphite Co.
Diamond Metal Co. 65
Dowell, Inc.

Eastman Well Survey Co.
E. H. Edwards Co.
Economy Electric Lantern Co.
Geo. H. Echols
Edwin H. Fitler Co.
Elliott Core Drilling Co.
Emsco Derrick & Equipment Co.

E. H. Fitler Co.
Ford Motor Co.
Fort Worth Laboratories 76
Frick-Reid Supply Co.

The Garlock Packing Co.
Gas Lift Engineering Co.
Gaso Pump & Burner Mfg. Co. 3
Gearench Manufacturing Co.
General Electric Co.
H. P. Gott Manufacturing Co.
B. F. Goodrich Rubber Co.
Gray Tool Co. 61
Gray Kerotest
The Guiberson Corp.
Gulf Publishing Co.
Gulf States Utilities Co.

Hall & Lowrey, Inc. 62
Halliburton Oil Well Cementing Co. Back Cover
Hamilton Brothers
Hardway & Cathey 76
Haynes Stellite Co. 49
Hazard Wire Rope Co.
C. M. Hester Sons Co.
Hercules Motors Corp.
The Hewitt-Kuster Co.
Hirsch, Susman & Westheimer 76
Houston Ready-Cut House Co. 60
Hughes Tool Co. Front Cover
Humble Oil & Refining Co.
Hyatt Roller Bearing Co.

Independent Exploration Co. 76
International Cement Corp. 6
International Derrick & Equipment Co.
International Harvester Co.
International Nickel Co.

Byron Jackson Co.
Jarecki Manufacturing Co.
W. P. Jenny
Jensen Brothers Manufacturing Co.
S. M. Jones Co.
Jones & Laughlin Steel Corp.

Kobe, Inc. 23
Kerotest Manufacturing Co. 37
Kibele Manufacturing Co.

Larkin Packer Co.
Layne & Bowler Co. 47
The Lane Wells Co.
Link Belt Co.
Ludlow Valve Manufacturing Co.
Lufkin Foundry & Machine Co. 21

MacClatchie Manufacturing Co.
Maloney Tank Mfg. Co.
Martin-Decker Corp.
F. G. Masquelette & Co.
J. H. McEvoy & Co.
Mengden & Sons Co.
Geo. S. Mepham Co.
Merchants Photo Service
Merco Nordstrom Valve Co.
Miller Sand Pump Co.
Mission Manufacturing Co. 29
Lee C. Moore & Co.
Muskogee Iron Works 38

The National Supply Co.
Norvell-Wilder Supply Co. 15

Oil Center Tool Co. 25
Oil City Brass Works
Oil Development Co.
Oil Equipment and Engineering Exposition
The Oil Well Improvements Co.
Oil Well Supply Co.
Oklahoma Gas & Electric Co.
Operation Engineers, Inc.
Osage Metal Co.
Oster-Williams

The Parkersburg Rig & Reel Co. Third Cover
Pelican Well Tool & Supply Co. 81
Hotel Pennsylvania 76
Petroleum Iron Works
Petroleum Rectifying Co.
Pittsburgh Equitable Meter Co.
Pittsburgh Steel Co.
Portable Rig Co.

Raybestos Manhattan, Inc.
Reed Roller Bit Co. 4
Regan Forge & Engineering Co. 66
Republic Portland Cement Co.
Republic Steel Corp.
The Republic Rubber Co.
Ridge Tool Co.

Scandanavia Belting Co.
Shell Union Oil Corp.
SKF Industries, Inc.
South Chester Tube Co.
Southern Pacific Lines 59
Southwestern Machine & Supply Co.
Howard Smith Co.
E. M. Smith Co. 68
Sperry-Sun Well Surveying Co. 80
Jesse R. Stone and Lester B. Clark 76
Stone Oil-Tool Co. 76

Texas Electric Service Co.
Texas Iron Works
Texas Rubber & Specialty Corp.
Texas Power & Light Co.
Toledo Pipe Threading Machine Co. 69
Tretolite Co.
Twin Disc Clutch Co.

United States Rubber Co.
Union Carbide & Carbon Corp.
Union Wire Rope Co. Second Cover

The Vellumoid Co.

Waukesha Motor Co.
Western Pneumatic Co.
Wickwire-Spencer Steel Co.
Williamsport Wire Rope Co.
J. H. Williams & Co.
Wilson Supply Co. 18
WKM Co.
Wyatt Metal & Boiler Works

Youngstown Sheet & Tube Co. Insert, 34-35

TO our many friends, throughout the oil and gas fields of the world, we extend our sincere good wishes for a Christmas of contentment and good cheer. May the New Year bring the consummation of your fondest hopes and ambitions.

●

THE PARKERSBURG RIG & REEL CO.

PARKERSBURG, WEST VIRGINIA

The genial fellow pictured above made his first public appearance, as a messenger of holiday cheer, in December of 1924. He has played a "return engagement" every year since.

In the ten years since the gentleman's first appearance, the oil industry has experienced plenty of ups and downs. That 1935 will be strictly a year of "ups" is the Christmas wish of

Halliburton Oil Well Cementing Co.
Duncan, Oklahoma